



LEVEL 2 WETLAND DELINEATION REPORT

HILLCREST REDEVELOPMENT MASTERPLAN

MAY 14, 2020

Prepared for: St. Paul Port Authority 380 St Peter St. St. Paul, MN 55102

WSB PROJECT NO. 013987-000



Project Name and/or Number: Hillcrest Redevelopment 013987-000

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Saint Paul Port Authority

(Kathryn L. Sarnecki, Vice President Redevelopment)

Mailing Address: 380 Saint Peter Street, Suite 850; St. Paul, MN 55102

Phone: 651-204-6221

E-mail Address: kls@sppa.com

Authorized Contact (do not complete if same as above): Monte Hilleman

Mailing Address:

Phone: 651-224-5686

E-mail Address: mmh@sppa.com

Agent Name: WSB (Dustin Simonson)

Mailing Address: 540 Gateway Blvd, Burnsville, MN 55337

Phone: 763-270-3475

E-mail Address: dsimonson@wsbeng.com

PART TWO: Site Location Information

County: Ramsey City/Township: St. Paul
Parcel ID and/or Address: SW Corner of Larpenteur Avenue East and McKight Road North

Legal Description (Section, Township, Range): S23, T29, R22

Lat/Long (decimal degrees): 44.983149, -93.007816

Attach a map showing the location of the site in relation to local streets, roads, highways.

Approximate size of site (acres) or if a linear project, length (feet): 115 acres

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform 4345 2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted *prior to* this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

lanning purposes.			

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	remove	Impact	Size of Impact ²	Overall Size of Aquatic Resource ³	Type(s) in Impact Area ⁴	County, Major Watershed #, and Bank Service Area # of Impact Area ⁵

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

_			oplication consultation with e a formal application reviev	· · · · · · · · · · · · · · · · · · ·	and LGU based on the information you his checked.	ave
, .	· ·	that the informat vork described he		mplete and a	accurate. I further attest that I possess	the
Signature:	Caft	Fi.		Date:	5/18/20	
I hereby a	uthorize WSB ([•	to act on my behalf as my a supplemental information in	•	processing of this application and to fulf this application.	rnish

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use Wetland Plants and Plant Community Types of Minnesota and Wisconsin 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Project Name and/or Number: Hillcrest Redevelopment 013987-000

Attachment A Request for Delineation Review, Wetland Type Determination, or **Jurisdictional Determination**

(Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):
Wetland Type Confirmation
Delineation Concurrence. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).
Preliminary Jurisdictional Determination. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.
Approved Jurisdictional Determination. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.
In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the <i>Guidelines for Submitting Wetland Delineations in Minnesota</i> (2013). http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx

Project Name and/or Number: Hillcrest Redevelopment 013987-000

Attachment B

Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part **if** you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR **if** you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

8420.0105 Subp 2 D

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

As part of the golf course construction back in the 1930's water hazards were constructed and used throughout the golf course. These areas have been maintained as water hazards over the life of the golf course by pumping water in and out of the ponds to maintain the desired water level.

LEVEL 2 WETLAND DELINEATION REPORT

HILLCREST REDEVELOPMENT MASTERPLAN

For:

ST. PAUL PORT AUTHORITY

May 14, 2020

Prepared by:



CERTIFICATION

The repo	rt was prepared by:
De	Bium
Dustin Simo	onson, WDC No.1303
Date: May 14, 2020	Title: Environmental Scientist

I hereby certify that this report was reviewed by me and that I am a Certified Wetland Delineator in the State of Minnesota.

Alison Harwood, WDC No.1238

Date: May 14, 2020 Title: Director of Natural Resources

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SECTION I

I. Introduction

A. Project Location

The project is located in the southeast corner of the intersection of Larpenteur Avenue East and McKnight Road North, in the City of St. Paul, Ramsey County, Minnesota. The project area consists of approximately 115 acres in Section 23 of Township 29 and Range 22, Major Watershed #20, BSA #7 (**Figure 1, Appendix A**).

B. Project Purpose

The St. Paul Port Authority is proposing redevelopment of the previously owned Hillcrest Golf Course. This report is intended to address all jurisdictional WCA, Public Water, or Section 404 wetlands and/or waters for final design and permitting of this project. This project was authorized by the St. Paul Port Authority.

C. Project Scope

The scope of this project was to delineate all wetlands within the outlined project area. Since the site was a functioning golf course many of the water resources present onsite are constructed ponds that were used as water hazards for the golf course. Part of this delineation was to showcase the difference between the constructed ponds and natural wetlands.

D. Summary of Findings

A Level 2 wetland delineation was performed on the site. A total of six wetlands and four ponds were identified and delineated in the preparation of this report, as summarized in **Table 1**. For a visual representation of the locations and size, please see **Figure 6**, **Appendix B**. All potential wetland areas (mapped hydric soils, NWI signatures, and low depressional areas) were reviewed on-site and either delineated or determined to be upland.

Table 1: Summary of Delineated Wetlands, Hillcrest Redevelopment, Ramsey County, Minnesota

ID	Delineation Method	No. Flags/ No. Transects	Eggers and Reed	Circular 39 (Cowardin)	NWI*	DNR PWI**	County Soil Survey (Hydric/Non -Hydric)***	Wetland Size (acres)
Pond A	Level 2	N/A	Shallow open water	Type 5 PUBG	Yes	NA	W	0.68 ac
Wetland B	Level 2	1-22/1	Shallow Marsh	Type 3 PEMC	Yes	NA	342C	0.43 ac
Wetland C	Level 2	1-24/1	Shallow Marsh	Type 3 PEMC	Yes	NA	1055	0.93 ac
Pond D	Level 2	N/A	Shallow open water	Type 5 PUBG	Yes	NA	W	0.79 ac
Wetland E	Level 2	1-32/1	Wet Meadow/ Shrub Carr	Type 2/6 PEMB/PSSA	No	NA	189	0.49 ac
Pond F	Level 2	1-27/1	Shallow Marsh / Shrub Carr	Type 3/6 PEMC/PSSA	Yes	NA	342C	0.13 ac

SECTION I

ID	Delineation Method	No. Flags/ No. Transects	Eggers and Reed	Circular 39 (Cowardin)	NWI*	DNR PWI**	County Soil Survey (Hydric/Non -Hydric)***	Wetland Size (acres)
Pond G	Level 2	1-20/1	Shallow open water	Type 5 PUBG	No	NA	W	0.39 ac
Wetland H	Level 2	1-22/1	Deep Marsh	Type 4 PEMF	Yes	NA	544	0.41 ac
Wetland I	Level 2	1-21/1	Shallow open water	Type 5 PUBG	Yes	NA	266/ 544	0.04 ac
Wetland J	Level 2	1-4/1	Seasonally flooded Basin	Type 1 PEMA	No	NA	1027	0.05 ac

^{* &}quot;Yes" indicates wetland is mapped in the NWI and "No" indicates the wetland is not mapped in the NWI.

^{** &}quot;NA" indicates the wetland is not mapped in the PWI. Numbers listed are the DNR ID, indicating the wetland is mapped in the PWI.

^{***}Bolded numbers indicate hydric soils.

II. Delineation Procedure

A. Off-Site Determination: Base Map Review

Topography: The landform consists of relatively flat area will gentle rolling hills and small depressions scattered throughout the site. The wetlands were located primarily along the eastern portion of the site. Water generally flows from the northwest to the southeast (**Figure 2**, **Appendix A**).

The DNR Public Waters and Wetlands Map, Ramsey County, MN (Minnesota Department of Natural Resources, 1983) shows no public waters within the project area (**Figure 3, Appendix A**).

The *National Wetlands Inventory Map* (Minnesota Department of Natural Resources) identified seven wetlands as part of the National Wetlands Inventory (NWI) (**Figure 4, Appendix A**). The NWI identifies the following wetland types: PUBGx, PEM1A, PEM1C, PSS1A, and PEM1F.

The Soil Survey of Ramsey County, Minnesota (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm) identified the following soils (**Table 2**) within the project area (**Figure 5**, **Appendix A**):

Table 2: Soil Survey

Map	Soil Unit Name	Percent	Rating
Symbol		Hydric	
153C	Santiago silt loam, 6 to 15 percent	0	Not
	slopes		hydric
189	Auburndale silt loam, 0 to 2	95	Predominantly
	percent slopes		hydric
266	Freer silt loam	5	Predominantly
			non-hydric
342B	Kingsley sandy loam, 2 to 6	3	Predominantly
	percent slopes		non-hydric
342C	Kingsley sandy loam, 6 to 12	0	Not
	percent slopes		hydric
342D	Kingsley sandy loam, 12 to 18	0	Not
	percent slopes		hydric
544	Cathro muck	97	Predominantly
			hydric
861C	Urban land-Kingsley complex, 3 to	0	Not
	15 percent slopes		hydric
1027	Udorthents, wet substratum	0	Not
			hydric
1055	Aquolls and histosols, ponded	100	All hydric
W	Water	0	Not
			hydric

Antecedent Climate Conditions: Historic climate data and WETS data were obtained from the Minnesota Climatology Working Group preceding the April 22 and 23, 2020 site visit, which fell within the wetter than normal precipitation range. Records of the precipitation can be found in **Appendix D**.

B. On-Site Determination

A Level 2 field investigation was conducted by Dustin Simonson (WDC No.1303) of WSB on April 21 and 22, 2020 within the project area. No deviation or omissions were undertaken as part of this investigation.

The project area was delineated using the routine methodology described in the *Corps of Engineers Wetlands Delineation Manual* (US Army Corps of Engineers 1987), with additional guidance provided by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0).* Wetlands were classified according to the methodologies set forth in *Wetlands of the United States (Circular 39)*, USFWS Shaw and Fredine 1971; *Classification of Wetlands and Deepwater Habitats of the United States*, Cowardin 1979; and *Wetland Plants and Plant Communities of Minnesota and Wisconsin, 2nd ed.*, Eggers and Reed 1997. The wetland types in this report are classified by the Circular 39, Cowardin, and Eggers and Reed Classifications.

Soil types were researched prior to the on-site investigation with the assistance of the *Soil Survey of Ramsey County* from the National Resources Conservation Service. All soil test pits were excavated to a minimum depth of 24 inches unless otherwise noted. Soil colors were described on-site per the *Munsell Soil Color Charts* (2009 Revised Edition) from the test pits in and adjacent to the wetlands. Hydric soils were identified using the current technical criteria for hydric soils developed by the NRCS in 2017 (Version 8.1). The presence of water was observed after time was allowed for movement of water through the substrate. This time varied depending upon soil characteristics.

The quadrant sampling method was employed for all sample points unless otherwise noted. Vegetation was measured as actual areal cover and may exceed 100 percent of total area due to overlap. Grasses and herbaceous vegetative cover were measured within a circular plot of a 5-foot-radius, all woody shrubs and saplings were measured within a circular plot with a 15-foot-radius, and trees and woody vines were measured in a 30-foot-radius circular plot. Regional plant identification resources were utilized in the identification of plant species, with indicator status taken from the 2016 National Wetland Plant List (US Army Corps of Engineers 2016). Plant species dominance was estimated based on the absolute percent coverage for herbaceous, shrub-sapling, and tree strata if present. In addition to the use of indicators of hydrology, hydric soils, and the presence of hydrophytic vegetation, other evidence such as topographic breaks and watershed characteristics were used to determine the wetland boundary.

Midwest Regional Supplement Routine Wetland Delineation data forms were used to record vegetation, hydrology, and soil characteristics at sample points in and adjacent to the wetlands (**Appendix B**). Sampling transects were taken along the wetland-upland boundary of the wetland. Transects and delineated wetland boundaries were field surveyed using a sub-meter accuracy handheld GPS unit. Approximate sampling points and delineated wetland edges are shown on **Figures 6a – 6e, Appendix B**. Pictures of each wetland can be found in **Appendix C**.

III. Results and Wetland Information

The wetland delineation data forms (**Appendix B**) and photos (**Appendix C**) are attached. A summary of the delineation is below.

A. Wetland B Circular 39: Type 3 Cowardin: PEMC

Eggers and Reed Field Classification: Shallow marsh

Soil mapping unit: Kingsley sandy loam

No. Transects: 1 No. Additional Sample Points: 0

Wetland Flags: 22

Wetland Size (within Project Area): 0.43 ac

Wetland B is positioned directly south of Pond A. The wetland is characterized as shallow marsh. The wetland boundary is outlined in **Figure 6b**, **Appendix B**.

Dominant vegetation in the wetland consisted of black willow (*Salix nigra*) and American elm (*Ulmus Americana*) in the tree stratum; Kentucky blue grass (*Poa pratensis*) in the herb stratum at the edge of the wetland. The interior of the wetland is dominated by narrow leaf cattails (*Typha angustifolia*). Hydric soil indicators were not specifically met but were considered to be hydric based on other factors. The soils were one shade off from Depleted Below Dark Surface (A11). This layer was also seen further in the wetlands within the cattails. It was assumed that this layer could be the remnants of past fill from the construction of the golf course. Hydrology indicators included Geomorphic Position (D2) and FAC-neutral Test (D5).

Dominant vegetation in the upland consisted of Kentucky blue grass (*Poa pratensis*) in the herb stratum. No hydric soil indicators were present in the upland sample point. No hydrology indicators were present in the upland sample point.

The wetland boundary was placed along a slight topographic break where soils lost redox in the upper layer.

B. Wetland C Circular 39: Type 3/6 Cowardin: PEMC/PSSA

Eggers and Reed Field Classification: Shallow marsh/Shrub carr

Soil mapping unit: Aquolls and histosols, ponded

No. Transects: 1 No. Additional Sample Points: 0

Wetland Flags: 24

Wetland Size (within Project Area): 0.93 ac

Wetland C is positioned southeast of Wetland B. The wetland is characterized as a wet meadow wetland with a shrub carr fringe. The wetland boundary is outlined in **Figure 6b**, **Appendix B**.

Dominant vegetation in the wetland consisted of American elm (*Ulmus Americana*) and black willow (*Salix nigra*) in the tree stratum; common buckthorn (*Rhamnus cathartica*) and sandbar willow (*Salix interior*) in the sapling/shrub stratum. Hydric soil indicators consisted of Black Histic (A3) and Loamy Mucky Mineral (F1). Hydrology indicators included Surface Water (A1), High Water Table (A2), Saturation (A3), Geomorphic Position (D2), and FAC-Neutral Test (D5).

Dominant vegetation in the upland consisted of Kentucky blue grass (*Poa pratensis*) in the herb stratum. No hydric soil indicators were present in the upland sample point. No hydrology indicators were present in the upland sample point.

The wetland boundary was placed along a topographic break where vegetation transitions from Kentucky blue grass into sandbar willow.

C. Wetland E Circular 39: Type 2/6 Cowardin: PEMB/PSSA

Eggers and Reed Field Classification: Wet meadow/Shrub Carr

Soil mapping unit: Auburndale silt loam

No. Transects: 2 No. Additional Sample Points: 0

Wetland Flags: 32

Wetland Size (within Project Area): 0.49 ac

Wetland E is positioned south of Pond D. The wetland is characterized as wet meadow in the northern portion of the wetland and a shrub carr in the south portion of the wetland. The wetland boundary is outlined in **Figure 6c, Appendix B**.

Dominant vegetation in the wetland consisted of reed canary grass (*Phalaris arundinacea*) in the herb stratum. Hydric soil indicators consisted of Thick Dark Surface (A12). Hydrology indicators included Geomorphic Position (D2), and FAC-Neutral Test (D5).

Dominant vegetation in the upland consisted of Kentucky blue grass (*Poa pratensis*) in the herb stratum. No hydric soil indicators were present in the upland sample point. No hydrology indicators were present in the upland sample point.

The wetland boundary was placed along a topographic break where vegetation transitions from Kentucky blue grass into reed canary grass.

D. Wetland H Circular 39: Type 4 Cowardin: PEMF

Eggers and Reed Field Classification: Deep Marsh

Soil mapping unit: Cathro Muck

No. Transects: 1 No. Additional Sample Points: 0

Wetland Flags: 22

Wetland Size (within Project Area): 0.41 ac

Wetland H is positioned in the southeast corner of the project area and is adjacently west of McKight Road. The wetland is characterized as deep marsh. The wetland boundary is outlined in **Figure 6d, Appendix B**.

Dominant vegetation in the wetland consisted lake bank sedge (*Carex lacustris*) in the herb stratum. Hydric soil indicators consisted of Loamy Mucky Mineral (F1). Hydrology indicators included Surface Water (A1), High Water Table (A2), Saturation (A3), Geomorphic Position (D2), and FAC-Neutral Test (D5).

Dominant vegetation in the upland consisted of quaking aspen (*Populus tremuloides*) in the tree stratum; common buckthorn (*Rhamnus cathartica*) in the sapling/shrub stratum; Kentucky blue grass (*Poa pratensis*) in the herb stratum. No hydric soil indicators were present in the upland sample point. No hydrology indicators were present in the upland sample point.

The wetland boundary was placed along a slight topographic break where vegetation transitions from lake bank sedge into common buckthorn.

E. Wetland I Circular 39: Type 5 Cowardin: PUBG

Eggers and Reed Field Classification: Shallow open water

Soil mapping unit: Freer silt loam / Cathro muck

No. Transects: 0 No. Additional Sample Points: 0

Wetland Flags: 21

Wetland Size (within Project Area): 0.04 ac

Wetland I is positioned North of Wetland H in the southeast portion of the project area. The wetland is characterized as shallow open water. The wetland boundary is outlined in **Figure 6d**, **Appendix B**.

Wetland I is primarily a channelized open water wetland. A channel to the west appears to be collecting excess water from drain tiles from the golf course. There is a fringe area in the northwest portion of the wetland that is seasonally flooded wetland that is mowed Kentucky blue grass.

The wetland boundary was placed along a steep topographic break where the open water channel rises into a wooded area on the east side and mowed grass on the west side.

F. Wetland J Circular 39: Type 1 Cowardin: PEMA

Eggers and Reed Field Classification: Seasonally flooded basin

Soil mapping unit: Udorthents, wet substratum

No. Transects: 1 No. Additional Sample Points: 0

Wetland Flags: 4

Wetland Size (within Project Area): 0.05 ac

Wetland J is positioned in the northwest portion of the project area. The wetland is characterized as seasonally flooded basin. The wetland boundary is outlined in **Figure 6e, Appendix B**.

Dominant vegetation in the wetland consisted of silver maple (*Acer saccharinum*) and green ash (*Fraxinus pennsylvanica*) in the tree stratum. Hydric soil indicators consisted of Thick Dark Surface (A12). Hydrology indicators included Geomorphic Position (D2), and FAC-Neutral Test (D5).

Dominant vegetation in the upland consisted of red oak (*Quercus rubra*) silver maple (*Acer saccharinum*) and green ash (*Fraxinus pennsylvanica*) in the tree stratum. No hydric soil indicators were present in the upland sample point. No hydrology indicators were present in the upland sample point.

The wetland boundary was placed along a topographic break where oaks no longer grew.

G. Golf Hazard Ponds

Four water features, Ponds A, D, F, and G, are present within the former golf course and were used as hazard ponds. The ponds were excavated from upland and water was pumped into them to create the open water features. These ponds are located in mapped areas of upland soils and have defined edges that resemble a constructed area. Although these ponds have wetland characteristics, they are incidental due to excavation and hydrology manipulation and should not be regulated under the Wetland Conservation Act. These ponds are described below.

a) Pond A

Circular 39: Type 5 Cowardin: PUBG

Eggers and Reed Field Classification: Shallow open water

Soil mapping unit: Water

Pond Size (within Project Area): 0.68 ac

Pond A is positioned in the northeast portion of the project. The wetland is characterized as shallow open water. The boundary is outlined in **Figure 6b**, **Appendix B**. This pond was used when the site was a functioning golf course. Because Pond A is an open water pond no transect was completed. The pond is primarily open water with small pockets of narrow leaf cattail (*Typha angustifolia*) near the eastern edge. The edge of the pond is manicured grass along most of the pond and a trail along the south edge.

The boundary was placed along a topographic break where the edge of the water met the manicured lawn.

b) Pond D

Circular 39: Type 5 **Cowardin:** PUBG

Eggers and Reed Field Classification: Shallow open water

Soil mapping unit: Water

Pond Size (within Project Area): 0.79 ac

Pond D is positioned south of Wetland G and is located in the center of the project area. The pond is characterized as shallow open water. The boundary is outlined in **Figure 6c**, **Appendix B**. This pond was used when the site was a functioning golf course. Since Pond D is an open water pond no transect was completed. No visible vegetation was growing at the time of the site visit. The edge of the pond is manicured grass along with rocks that line the pond.

The boundary was placed along a topographic break where the edge of the water met the manicured lawn.

c) Pond F

Circular 39: Type 3/6 Cowardin: PEMC/PSSA

Eggers and Reed Field Classification: Shallow Marsh / Shrub Carr

Soil mapping unit: Kingsley Sandy Loam **Pond Size (within Project Area):** 0.13 ac

Pond F is positioned in the southwestern portion of the project area. The pond is characterized as shallow marsh with a shrub carr fringe. The boundary is outlined in **Figure 6d, Appendix B**.

Dominant vegetation consisted of sandbar willow (*Salix interior*) along the edges in the sapling/shrub stratum. Hydric soil indicators consisted of Thick Dark Surface (A12). Hydrology indicators included Geomorphic Position (D2), and FAC-Neutral Test (D5).

Dominant vegetation in the upland consisted of Kentucky blue grass (*Poa pratensis*) in the herb stratum. No hydric soil indicators were present in the upland sample point. No hydrology indicators were present in the upland sample point.

The boundary was placed along a topographic break where vegetation transitions from Kentucky blue grass into sandbar willow.

d) Pond G

Circular 39: Type 5 Cowardin: PUBG

Eggers and Reed Field Classification: Shallow open water

Soil mapping unit: Water

Pond Size (within Project Area): 0.39 ac

Pond G is positioned north of Pond D and is in the center of the project area. The pond is characterized as shallow open water wetland. The boundary is outlined in **Figure 6c**, **Appendix B**. This pond was used when the site was a functioning golf course. Because Pond G is an open water pond no transect was completed. No visible vegetation was growing at the time of the site visit. The edge of the pond is manicured grass along with rocks that line the pond.

The boundary was placed along a topographic break where the edge of the water met the manicured lawn.

H. Additional Aquatic Resources

One wet ditch was present onsite. This ditch is located west of Wetland I and is separated from the wetland by a trail (**Figure 6c, Appendix B**). Hydrology is connected to Wetland I through a culvert. This ditch is rock lined and was mowed at the time of the site visit. The ditch has enough of a slope where water flows through the ditch and into Wetland I.

I. Additional Sampled Areas

Two additional sample points were taken during the site visit, SP1 and SP2. SP1 is located along the western edge of the project area (**Figure 6d**, **Appendix B**). This area is a depression area where water appears to collect. Upon review the area was dominated by Kentucky blue grass but did not meet hydric soils and was delineated as upland. SP2 is located in the southeast portion of the project area (**Figure 6d**, **Appendix B**). This area is a depression in a wooded area that was dominated by red oaks and green ash. This area appears to collect water but does not have hydric soils and was delineated as upland.

SECTION IV

IV. Summary and Closing Statements

Six wetlands were delineated within the project area using the Level 2 method. Four ponds and one wet ditch were also identified that were constructed as part of the golf course. Two additional areas investigated but determined to be upland.

The wetland delineation report was completed by Dustin Simonson of WSB. This delineation report is being submitted as a request for approval of Wetland Type and Boundary of the wetland described herein. The application for Boundary and Type Approval is included along with this report.

SECTION V

V. References

The following sources of information were reviewed to assist in performing the wetland delineation.

Literature Sources

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- United States Army Corps of Engineers- St. Paul District and Minnesota Board of Water & Soil Resources. March 4, 2015. Guidance for Submittal of Delineation Reports to the St. Paul District Army Corps of Engineers and Wetland Conservation Act Local Governmental Units in Minnesota, Version 2.0.
- United States Army Corps of Engineers. 1987 2014. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. Version 2.0 Waterways Experiment Station.
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Webs Soil Survey, Minnesota. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed 4/20/2020.

APPENDIX

APPENDIX A

Figure 1: Project Location
Figure 2: Topography
Figure 3: DNR Public Waters Inventory
Figure 4: National Wetlands Inventory
Figure 5: County Soil Survey

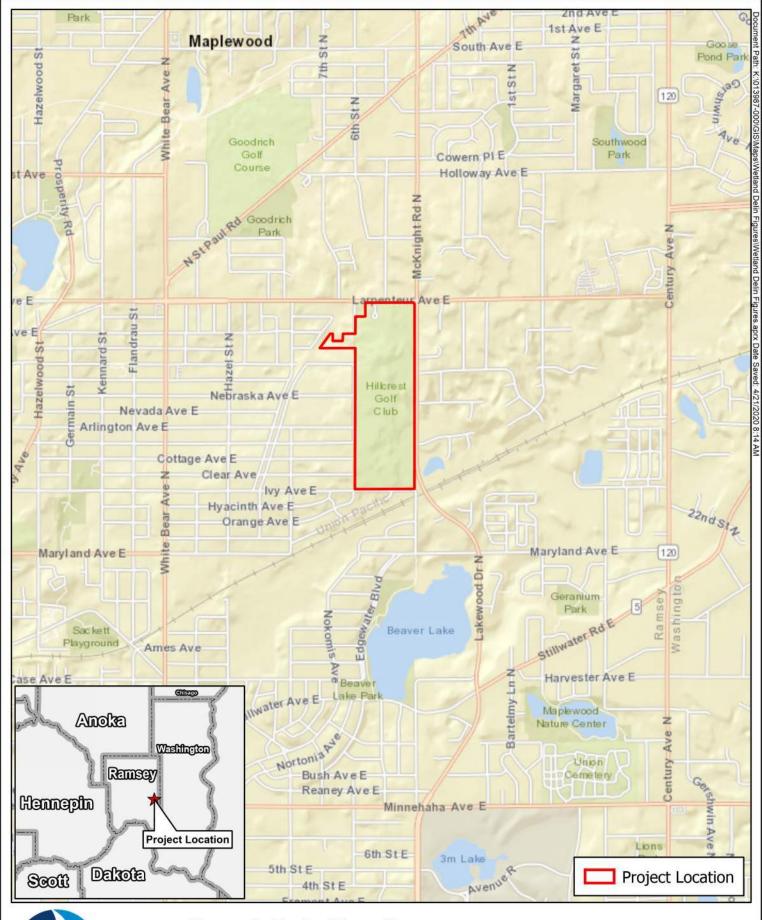




Figure 1: Project Location

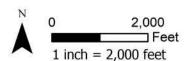








Figure 2: Topography





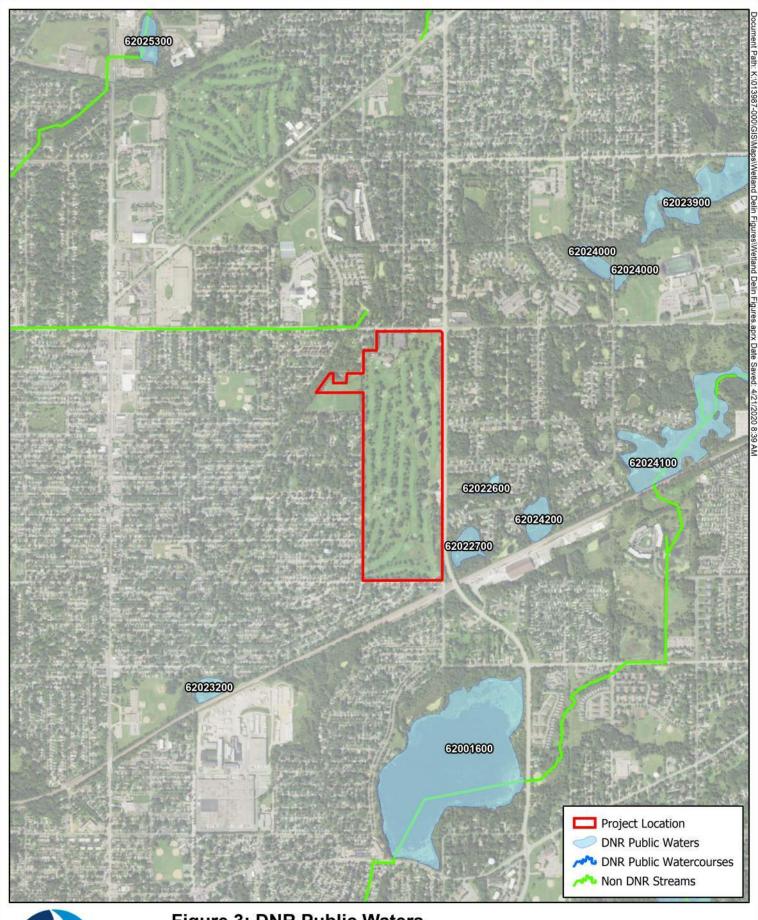




Figure 3: DNR Public Waters

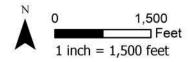
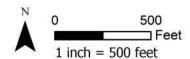








Figure 4: National Wetlands Inventory





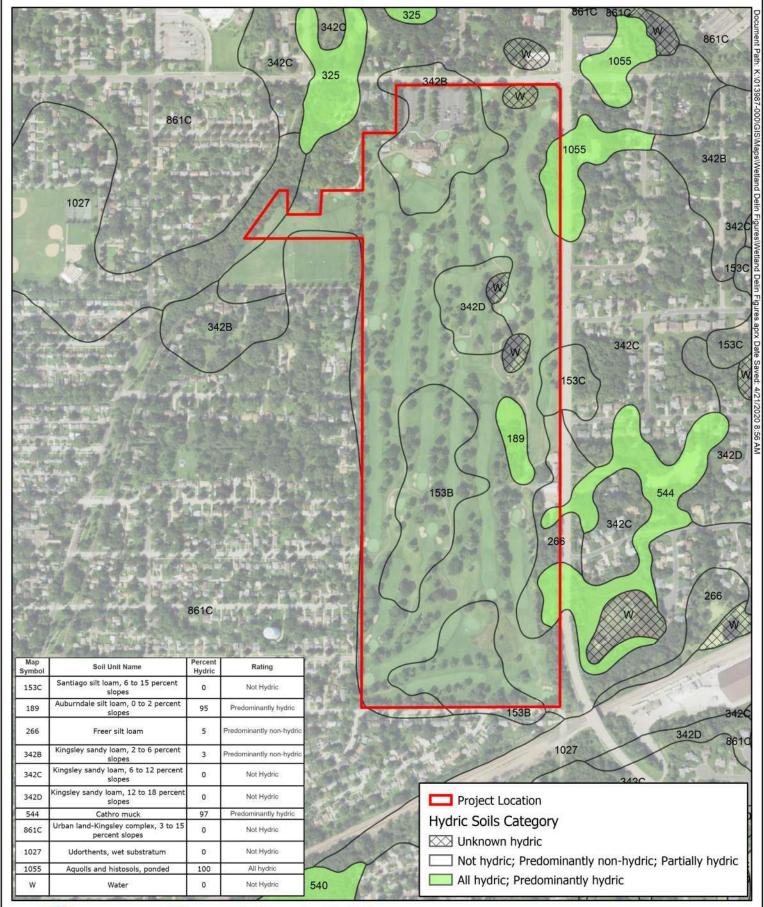
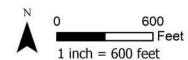




Figure 5: County Soil Survey





APPENDIX

APPENDIX B

Figure 6: Wetland Delineation Wetland Determination Data Forms





Figure 6a Wetland Delineation

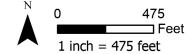








Figure 6b Wetland Delineation

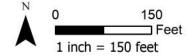








Figure 6c Wetland Delineation

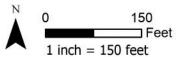








Figure 6d Wetland Delineation

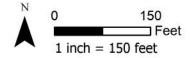


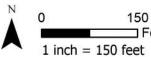






Figure 6e Wetland Delineation

Hillcrest Redevelopment Master Plan St. Paul Port Authority St. Paul, MN





□ Feet

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Hillcrest Redevelopment	City/Co	ounty:	St. Paul	1 8	Sampling Date:	4/22/20
Applicant/Owner: St. Paul Port Authority	-	State:	MN	s	Sampling Point:	B1 Up
Investigator(s): Dustin S.		Section	n, Township	o, Range:	S23	, T29, R22
Landform (hillslope, terrace, etc.):		Local re	elief (concav	e, convex,	none):	Concave
Slope (%): 2 Lat: 44.991312		Long:	-93.00059	15 [Datum:	
Soil Map Unit Name Kingsley sandy loam			NMI C	Classificatio	on:	PEMC
Are climatic/hydrologic conditions of the site typical for this	s time of t	he year?	N (I	f no, explai	n in remarks)	
Are vegetation X , soil , or hydrology	, s	significantly	disturbed?	A	re "normal circ،	umstances"
Are vegetation , soil , or hydrology	, r	naturally pro	oblematic?			present? Yes
SUMMARY OF FINDINGS				(If neede	d, explain any a	nswers in remarks.)
Hydrophytic vegetation present? Y						
Hydric soil present?		Is the sa	ampled area	a within a v	wetland?	N
Indicators of wetland hydrology present?		f yes, opt	tional wetlan	d site ID:		
Remarks: (Explain alternative procedures here or in a sep	parate repo	ort.)		<u> </u>		
· · ·	·	•				
Area is we	etter than	normal a	ind is mow	ed.		
VEGETATION Use scientific names of plants.						
	osolute [Dominan	Indicator	Dominar	nce Test Works	sheet
- · · · ·	Cover t		Staus		of Dominant Spec	
1		·			BL, FACW, or FA	
2				Total N	lumber of Domin	ant
3				Specie	es Across all Stra	ata:1 (B)
4					f Dominant Spec	
5				that are O	BL, FACW, or FA	AC: 100.00% (A/B)
Sapling/Shrub stratum (Plot size: 15')	0 = 7	Total Cover		Drovolon	nce Index Work	choot
Sapling/Shrub stratum (Plot size: 15')				Total % (Sileet
				OBL spe		x 1 = 0
3				FACW sp		x 2 = 0
4				FAC spe	cies 98	x 3 = 294
5				FACU sp	ecies 2	x 4 = 8
<u> </u>	0 = 7	Total Cover		UPL spec		x 5 = 0
Herb stratum (Plot size: 5')				Column t		(A) <u>302</u> (B)
1 Poa pratensis	98	Y	FAC	Prevalen	ce Index = B/A	= 3.02
2 arctium minus			FACU			
3 Cirsium arvense		<u>N</u>	FACU		ytic Vegetation	n Indicators: Phytic vegetation
5					inance test is >5	
6					alence index is:	
7					hogical adaptat	
8					orting data in R	
9				sepa	rate sheet)	
10					lematic hydroph	ytic vegetation*
<u></u>	100 = 7	Total Cover		(expl	ain)	
Woody vine stratum (Plot size: 30')					•	wetland hydrology must be
					resent, unless distui rophytic	rbed or problematic
	0 =7	Total Cover		_	etation	
	0 -1	I Otal Cover		pres		<u>, </u>
Remarks: (Include photo numbers here or on a separate s	sheet)					
Mowed golf course	•					

SOIL Sampling Point: B1 Up

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abse	nce of indicators.)
Depth	<u>Matrix</u>		Red	dox Feat	<u>ures</u>			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-5	10YR 2/1	100					Loam	
5-20	10YR 4/3	100					Sandy Loam	
20-24	10YR 5/1	95	7.5 YR 4/6	5	С	М	Loam	
20-24	10113/1	95	7.5 TR 4/0	3	C	IVI	Loaiii	
*T. /	Composition D	– Danlati	ion DM – Doduce	d Matrix	. MC = N	Applied C	land Crains **I seet	ion DI – Doro Lining M – Moteix
		= Depleti	ion, RM = Reduce	ed iviatrix	i, IVIS = IV	nasked S		ion: PL = Pore Lining, M = Matrix
_	oil Indicators:		Cam	du Clave	ad Matrix	· (C4)		blematic Hydric Soils:
	tisol (A1)				ed Matrix	(54)		ledox (A16) (LRR K, L, R)
	tic Epipedon (A2)			dy Redo	. ,		Dark Surface (S	e Masses (F12) (LRR K, L, R)
	ck Histic (A3)	4)			trix (S6)	-1 (54)		, , , , , , , , , , , , , , , , , , , ,
	drogen Sulfide (A				ky Minera			Park Surface (TF12)
	atified Layers (A5)			ed Matrix	. ,	Other (explain	in remarks)
	m Muck (A10)	. Cumfo o o			atrix (F3) Surface			
	oleted Below Dark		` ' 			` '	** ** * **	
	ck Dark Surface (ndy Mucky Minera	,			ark Surfa			drophytic vegetation and weltand
	, ,	` ,		iox Depr	essions	(F8)	nyarology must	be present, unless disturbed or
	m Mucky Peat or	•)					problematic
	Layer (if observ	ed):						
Type:							Hydric soil prese	ent? N
Depth (inche	es):				_			
Remarks:								
	3 laver lacked i	e voher	s in wetland sa	mnle n	oint			
101104/	o layer lacked i	cuox a	s III Welland Sa	ilibie bi	JIIIL			
HYDROLO	OGY							
	drology Indicate	ors:						
_			required; check	all that a	nnly)		Cocondonyl	adiantera (minimum of two required)
	Water (A1)	or one is	required, check		рріу) Fauna (B	12\		ndicators (minimum of two required) e Soil Cracks (B6)
	ater Table (A2)				гаина (Б uatic Plar			ge Patterns (B10)
Saturation						Odor (C		eason Water Table (C2)
	larks (B1)						<u> </u>	h Burrows (C8)
	nt Deposits (B2)			(C3)	1 (111200p	110100 011		tion Visible on Aerial Imagery (C9)
	posits (B3)				e of Redu	uced Iron		d or Stressed Plants (D1)
	at or Crust (B4)			-			· · ·	orphic Position (D2)
	oosits (B5)			(C6)				eutral Test (D5)
	on Visible on Aeria	al Imager	y (B7)	Thin Mu	ck Surfac	e (C7)		, ,
Sparsely	/ Vegetated Conca	ave Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	rvations:							
Surface wat	er present?	Yes	No	X	Depth (i	nches):		
Water table	present?	Yes	No	X	Depth (i	nches):	li	ndicators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hydrology present? N
(includes ca	pillary fringe)				_			
Describe red	corded data (strea	am gaug	e, monitoring well	, aerial p	hotos, p	revious ii	nspections), if available:	
	•	- 0	-	·	• •		•	
Remarks:								

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Hillcrest Redevelopment	City/	County:	St. Pau	I Sampling Date:	4/22/20
Applicant/Owner: St. Paul Port Authority		State:	MN		
Investigator(s): Dustin S.		Section	on, Townshi	p, Range: S2	3, T29, R22
Landform (hillslope, terrace, etc.): Depre	ssion	Local re	elief (concav	ve, convex, none):	Concave
Slope (%): 0 Lat: 44.991329)	Long:	-93.0060	Datum:	
Soil Map Unit Name Kingsley sandy loam			VWI (Classification:	PEMC
Are climatic/hydrologic conditions of the site typical for	r this time o	of the year?	N (I	f no, explain in remarks)	
Are vegetation X , soil , or hydrol	logy	significantly	disturbed?	Are "normal circ	cumstances"
Are vegetation , soil , or hydrol		naturally pro	oblematic?	, ao monnar an	present? Yes
SUMMARY OF FINDINGS	·· <u> </u>			(If needed, explain any	answers in remarks.)
Hydrophytic vegetation present? Y					
Hydric soil present? Y	_	Is the sa	ampled area	a within a wetland?	Υ
Indicators of wetland hydrology present?	_	f yes, op	tional wetlar	nd site ID:	
Remarks: (Explain alternative procedures here or in a	senarate r	anort)			
Themains. (Explain alternative procedures here of in a	separate re	sport.)			
Area is	wetter th	an normal a	and is mow	/ed.	
VEGETATION III	1-				
VEGETATION Use scientific names of plan		D	L. P. L.	Dominance Test Work	rohaat
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominan t Species	Indicator Staus		
1 Salix nigra	15	Y	OBL	Number of Dominant Spe that are OBL, FACW, or F	
2 Ulmus americana	5	<u> </u>	FACW	Total Number of Domi	 ` ` ´
3				Species Across all St	
4				Percent of Dominant Spe	ecies
5				that are OBL, FACW, or F	FAC: 100.00% (A/B)
	20	= Total Cover	=		
Sapling/Shrub stratum (Plot size: 15'))			Prevalence Index Wor	ksheet
1				Total % Cover of:	4 = 45
2				OBL species 15	x 1 = 15
·		<u> </u>		OBL species 15 FACW species 5	x 2 = 10
2				OBL species 15 FACW species 5 FAC species 98	
2 3 4		= Total Cover		OBL species 15 FACW species 5 FAC species 98	x 2 = 10 x 3 = 294
2 3 4		=Total Cover		OBL species 15 FACW species 5 FAC species 98 FACU species 2	x 2 = 10 x 3 = 294 x 4 = 8
2 3 4 5	0 98	=Total Cover	FAC	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0	x 2 = 10 x 3 = 294 x 4 = 8 x 5 = 0 (A) 327 (B)
2 3 4 5 Herb stratum (Plot size: 5'))			OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120	x 2 = 10 x 3 = 294 x 4 = 8 x 5 = 0 (A) 327 (B)
2 3 4 5 Herb stratum (Plot size: 5') 1 Poa pratensis	98	Y	FAC	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A	x 2 = 10 $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ (B) on Indicators:
2 3 4 5 Herb stratum (Plot size: 5') 1 Poa pratensis 2 arctium minus	98	Y N	FAC FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation	x 2 = 10 x 3 = 294 x 4 = 8 x 5 = 0 (A) 327 (B) 2.73 on Indicators:
2 3 4 5 Herb stratum (Plot size: 5') 1 Poa pratensis 2 arctium minus 3 Cirsium arvense 4 5	98	Y N	FAC FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetatic Rapid test for hydro X Dominance test is >	x 2 = 10 x 3 = 294 x 4 = 8 x 5 = 0 (A) 327 (B) 2.73 con Indicators: ophytic vegetation e-50%
2 3 4 5 Herb stratum (Plot size: 5') 1 Poa pratensis 2 arctium minus	98	Y N	FAC FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromytic Vegetation X Dominance test is > X Prevalence index is	x 2 = 10 x 3 = 294 x 4 = 8 x 5 = 0 (A) 327 (B) x = 2.73 Son Indicators: aphytic vegetation 250% $x = 3.0^*$
2 3 4 5 Herb stratum (Plot size: 5') 1 Poa pratensis 2 arctium minus 3 Cirsium arvense 4 5 6 7	98	Y N	FAC FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromytic Vegetation X Dominance test is > X Prevalence index is Morphogical adaptation	x 2 = 10 x 3 = 294 x 4 = 8 x 5 = 0 (A) 327 (B) x = 2.73 Son Indicators: aphytic vegetation at 250% $x = 3.0^*$ at ions* (provide)
2 3 4 5 Herb stratum (Plot size: 5') 1 Poa pratensis 2 arctium minus 3 Cirsium arvense 4 5	98	Y N	FAC FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromytic Vegetation X Dominance test is 2 X Prevalence index is 3 Morphogical adaptate supporting data in F	x 2 = 10 x 3 = 294 x 4 = 8 x 5 = 0 (A) 327 (B) x = 2.73 Son Indicators: aphytic vegetation at 250% $x = 3.0^*$ at ions* (provide)
2 3 4 5 Herb stratum (Plot size: 5') 1	98	Y N	FAC FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromytic Vegetation X Dominance test is 2 X Prevalence index is 3 Morphogical adaptate supporting data in Face separate sheet)	$x 2 = 10$ $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ $(B) 3$ $x = 2.73$ So Indicators: Sophytic vegetation 2.50% $x \le 3.0^*$ Setions* (provide Remarks or on a
2 3 4 5 Herb stratum (Plot size: 5') 1	98 1 1	Y N	FAC FACU FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromytic Vegetation X Dominance test is 2 X Prevalence index is 3 Morphogical adaptate supporting data in F	$x 2 = 10$ $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ $(B) 3$ $x = 2.73$ So Indicators: Sophytic vegetation 2.50% $x \le 3.0^*$ Setions* (provide Remarks or on a
2 3 4 5 Herb stratum (Plot size: 5') 1	98 1 1	Y N N	FAC FACU FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromatic supporting data in Face separate sheet) Problematic hydrop (explain)	x 2 = 10 $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ (B) $x = 2.73$ Son Indicators: Supplyitic vegetation $x = 50%$ $x = 3.0*$ Setions* (provide Remarks or on a supplyitic vegetation*
2 3 4 5 Herb stratum (Plot size: 5') 1	98 1 1	Y N N	FAC FACU FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromatic supporting data in Face separate sheet) Problematic hydropomoles (explain) *Indicators of hydric soil and present, unless distinguished to the separate sheet of the	$x 2 = 10$ $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ $(B) 3$ $x = 2.73$ So Indicators: Sophytic vegetation 2.50% $x \le 3.0^*$ Setions* (provide Remarks or on a
2 3 4 5 Herb stratum (Plot size: 5') 1	98 1 1 1	N N = Total Cover	FAC FACU FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydrom X Dominance test is 2 X Prevalence index is Morphogical adaptate supporting data in Face separate sheet) Problematic hydropolematic hydropolematic hydropolematic hydropolematic is 15 Indicators of hydric soil and present, unless disting 15 Hydrophytic	x 2 = 10 $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ (B) $x = 2.73$ For Indicators: Supplying the expectation expectation expectations and expectations are supplying to the expectation expectation expectations and expectation expectation and expectation expectation expectation and expectation expecta
2 3 4 5 Herb stratum (Plot size: 5') 1	98 1 1 1	Y N N	FAC FACU FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromatic supporting data in Face separate sheet) Problematic hydrop (explain) *Indicators of hydric soil and present, unless disting the separate sheet in the separate sheet	x 2 = 10 $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ (B) $x = 2.73$ For Indicators: Supplying the expectation expectation expectations and expectations are supplying to the expectation expectation expectations and expectation expectation and expectation expectation expectation and expectation expecta
2 3 4 5 Herb stratum (Plot size: 5') 1	98 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N N = Total Cover	FAC FACU FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydrom X Dominance test is 2 X Prevalence index is Morphogical adaptate supporting data in Face separate sheet) Problematic hydropolematic hydropolematic hydropolematic hydropolematic is 15 Indicators of hydric soil and present, unless disting 15 Hydrophytic	x 2 = 10 $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ (B) $x = 2.73$ For Indicators: Supplying the expectation expectation expectations and expectations are supplying to the expectation expectation expectations and expectation expectation and expectation expectation expectation and expectation expecta
2 3 4 5 Herb stratum (Plot size: 5') 1 Poa pratensis 2 arctium minus 3 Cirsium arvense 4 5 6 7 8 9 10 Woody vine stratum (Plot size: 30') 1 2 Remarks: (Include photo numbers here or on a separate	98 1 1 1 1 100 0	Y N N	FAC FACU FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromatic supporting data in Face separate sheet) Problematic hydrop (explain) *Indicators of hydric soil and present, unless disting the separate sheet in the separate sheet	x 2 = 10 $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ (B) $x = 2.73$ For Indicators: Supplying the expectation expectation expectations and expectations are supplying to the expectation expectation expectations and expectation expectation and expectation expectation expectation and expectation expecta
2 3 4 5 Herb stratum (Plot size: 5') 1	98 1 1 1 1 100 0	Y N N	FAC FACU FACU	OBL species 15 FACW species 5 FAC species 98 FACU species 2 UPL species 0 Column totals 120 Prevalence Index = B/A Hydrophytic Vegetation Rapid test for hydromatic supporting data in Face separate sheet) Problematic hydrop (explain) *Indicators of hydric soil and present, unless disting the separate sheet in the separate sheet	x 2 = 10 $x 3 = 294$ $x 4 = 8$ $x 5 = 0$ $(A) 327$ (B) $x = 2.73$ For Indicators: Supplying the expectation expectation expectations and expectations are supplying to the expectation expectation expectations and expectation expectation and expectation expectation expectation and expectation expecta

SOIL Sampling Point: B1 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth <u>Matrix</u>			Redox Features							
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks	
0-7	10YR 2/1	100					Loam			
7-16	10YR 4/3	85	5YR 4/6	15	С	М	Sandy Loam			
16-24	10YR 5/1	90	7.5 YR 4/6	10	С	M	Loam			
10-24	10110 3/1	90	7.5 110 4/0	10		IVI	Loain			
*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix										
Hydric Soil Indicators: Indicators for Problematic Hydric Soils:										
_	Histisol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR K, L, R)									
Histic Epipedon (A2) Sandy Gleyed Matrix Sandy Redox (S5)						Dark Surface (S7) (LRR K, L)				
Black Histic (A3) Black Histic (A3) Stripped Matrix (S6)							Iron-Manganese Masses (F12) (LRR K, L, R)			
	rogen Sulfide (A	1)			, ,	al (F1)		•	, ,,	
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) X Other (explain in remarks)										
2 cm Muck (A10) Depleted Matrix (F3)										
Depleted Below Dark Surface (A11) Redox Dark Surface (F6)										
Thick Dark Surface (A12) Depleted Dark Surface (F7) *Indicators of hydrophytic vegetation and weltand										
	Sandy Mucky Mineral (S1) Redox Depressions (F8) hydrology must be present, unless disturbed or									
5 cm Mucky Peat or Peat (S3)										
Restrictive Layer (if observed): Type: Hydric soil present? Y										
Type:)c).				•		riyuric soi	ii pieseiit	? <u> </u>	
Depth (inches):										
Remarks:										
Same brown layer found within cattails. Layer is one shade off from meeting depleted below dark surface. Sand layer p										
HYDROLOGY										
	drology Indicate									
Primary Indi	cators (minimum	of one is	required; check a				<u>Secor</u>	ndary Indic	cators (minimum of two required)	
Surface Water (A1) Aquatic Fauna (B13) Surface Soil Cracks (B6)								* *		
High Water Table (A2) True Aquatic Plants						, ,	· ,			
Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)										
	Water Marks (B1) Oxidized Rhizospheres on Living Roots Crayfish Burrows (C8)									
	Sediment Deposits (B2) C3) Saturation Visible on Aerial Imagery (C9) Character (B2) C4 C5 C7 C7 C7 C8 C7 C8 C8 C8 C8 C8									
	Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils X Geomorphic Position (D2)									
	osits (B5)			(C6)	ion Redu	icuon in i			ral Test (D5)	
	on Visible on Aeria	l Imagery	/ (B7)	` '	ck Surfac	e (C7)		- AO-Neut	rai rest (DO)	
Sparsely	Vegetated Conca	ve Surta	ce (B8)		r Well Da	, ,				
Water-St	Water-Stained Leaves (B9) Other (Explain in Remarks)									
Field Observations:										
Surface water		Yes	No	Х	Depth (i	nches):				
Water table	•	Yes	No	X	Depth (i			Indi	cators of wetland	
Saturation p		Yes	X No		Depth (i	,	0-6 inches	hyd	drology present?	
(includes ca					• • •	•]		
Describe rec	orded data (strea	am gauge	e, monitoring well	, aerial p	hotos, p	revious ii	nspections), if ava	ailable:		
	`	5 5			, 1		. ,,			
Remarks:		_				_				
Area has	saturation at t	he surf	ace but does n	ot have	a wate	r table լ	oresent at time	of site vi	sit.	

Project/Site Hillcrest Redevelopment	City/0	County:	St. Paul	Sampling Date	e: 4/22/20				
Applicant/Owner: St. Paul Port Authority		State:	MN						
Investigator(s): Dustin S.			on. Townshir	o, Range: S					
Landform (hillslope, terrace, etc.): Hillslop	oe .		-	e, convex, none):					
Slope (%): 5 Lat: 44.990613	-	Long:	-93.00363						
Soil Map Unit Name Aquolls and histosols				Classification:	PEMC				
Are climatic/hydrologic conditions of the site typical for t	this time of	f the vear?		f no, explain in remarks)					
Are vegetation X , soil , or hydrologic		significantly							
		naturally pro		Are "normal ci	rcumstances" present? Yes				
Are vegetation, soil , or hydrolog	gy	naturally pro	obiemanc:	(If needed, explain any	·				
Hydrophytic vegetation present?				(ii fieeded, explain any	answers in remarks.)				
		la tha a		ithin aatland2	N				
Hydric soil present? N			-	a within a wetland?	<u>N</u>				
Indicators of wetland hydrology present? N		i yes, op	tional wetlan	id site id:					
Remarks: (Explain alternative procedures here or in a separate report.)									
Aroa is y	vottor the	an normal a	and is mou	vod.					
Alea is v	weller line	ali lioilliai a	and is mow	reu.					
VEGETATION Use scientific names of plants).								
	Absolute	Dominan	Indicator	Dominance Test Wor	ksheet				
Tree Stratum (Plot size: 30')	% Cover	t Species	Staus	Number of Dominant Sp					
1				that are OBL, FACW, or	FAC: 1 (A)				
2				Total Number of Don					
3				Species Across all S	 ', '				
				Percent of Dominant Sp					
5	0 :	Total Cover	 	that are OBL, FACW, or	FAC: 100.00% (A/B)				
Sapling/Shrub stratum (Plot size: 15')		- Total Cover		Prevalence Index Wo					
1				Total % Cover of:	, Roncet				
				OBL species 0	x 1 = 0				
3				FACW species 0	x 2 = 0				
4				FAC species 98	x 3 = 294				
5				FACU species 2	x 4 = 8				
	0 =	Total Cover		UPL species 0	x 5 = 0				
Herb stratum (Plot size: 5')				Column totals 100	(A) <u>302</u> (B)				
1 Poa pratensis	98	Υ	FAC	Prevalence Index = B/	A = 3.02				
2 Arctium minus	2	N	FACU						
3				Hydrophytic Vegetat					
4					rophytic vegetation				
5				X Dominance test is					
				Prevalence index					
8				Morphogical adap					
9				supporting data in separate sheet)	Remarks of on a				
10				Problematic hydro	nhytic vegetation*				
	100 :	Total Cover		(explain)	priyao vogotation				
Woody vine stratum (Plot size: 30')					nd wetland hydrology must be				
1				•	sturbed or problematic				
2				Hydrophytic					
	0 =	Total Cover	=	vegetation					
				present?	<u>Y</u>				
Remarks: (Include photo numbers here or on a separate	e sheet)								

SOIL	Sampling Point:	C1 Up
JOIL	Samping Folia.	CIUD

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	indicat	or or confirm the abs	ence of indicators.)
Depth	Matrix		Red	dox Feat	<u>ures</u>			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-21	10YR 2/1	100					Loam	
21-30	10YR 2/1	90					Loam	
21-30	10YR 4/3	10						
							Loam	
30-36	10YR 4/3	100					Loam	
	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	x, MS = N	lasked S		ation: PL = Pore Lining, M = Matrix
_	il Indicators:							oblematic Hydric Soils:
	isol (A1)				ed Matrix	(S4)		Redox (A16) (LRR K, L, R)
	ic Epipedon (A2)			ndy Redo	. ,			(S7) (LRR K, L)
	ck Histic (A3)			pped Ma	. ,			ese Masses (F12) (LRR K, L, R)
	lrogen Sulfide (A4		Loa	my Mucl	ky Minera	al (F1)	Very Shallow	Dark Surface (TF12)
Stra	tified Layers (A5))	Loa	my Gley	ed Matrix	k (F2)	Other (explain	n in remarks)
2 cr	n Muck (A10)		Dep	oleted Ma	atrix (F3)			
Dep	leted Below Dark	Surface	(A11) Red	dox Dark	Surface	(F6)		
Thic	ck Dark Surface (A12)	Dep	oleted Da	ark Surfa	ce (F7)	*Indicators of h	ydrophytic vegetation and weltand
San	dy Mucky Minera	ıl (S1)	Red	dox Depr	essions ((F8)		st be present, unless disturbed or
5 cr	n Mucky Peat or	Peat (S3)				,	problematic
	Layer (if observe		•			I		· · · · · · · · · · · · · · · · · · ·
	Layer (II observe	eu).					Hudria cail proc	cont2 N
Type:					-		Hydric soil pres	sent? N
Depth (inche	es):				-			
Remarks:								
HYDROLO	OGY							
	drology Indicate	ors:						
_	cators (minimum		required: check	all that a	nnly)		Secondary	Indicators (minimum of two required)
		oi one is	required, check			12)	_	Indicators (minimum of two required)
	Water (A1)				Fauna (B	•		ce Soil Cracks (B6)
	ter Table (A2)				uatic Plar			age Patterns (B10)
Saturatio	, ,				n Sulfide	•	· ·	season Water Table (C2)
	arks (B1)				Rnizosp	neres on		ish Burrows (C8)
	nt Deposits (B2)			(C3)	f Dd-			ation Visible on Aerial Imagery (C9)
	oosits (B3)			-	e of Redu		· ·	ed or Stressed Plants (D1)
	t or Crust (B4)				ron Redu	iction in I		norphic Position (D2)
	osits (B5) on Visible on Aeria	ıl İmanen	(B7)	(C6)	ok Surfoo	o (C7)	FAC-	Neutral Test (D5)
	Vegetated Conca		` '		ck Surfac	. ,		
	•			_	or Well Da		\	
	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser								
Surface water	•	Yes	No	X	Depth (i			
Water table	•	Yes	No No	X	Depth (i			Indicators of wetland
Saturation p		Yes	No	X	Depth (i	nches):		hydrology present? N
(includes ca								
Describe red	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pi	revious ir	nspections), if available	:
Remarks:								

Project/Site Hillcrest Redevelopment	City/	County:	St. Pau	Sampling Da	ate: 4/22/20				
Applicant/Owner: St. Paul Port Authority		State:	MN						
Investigator(s): Dustin S.		Section	on, Township	o, Range:					
Landform (hillslope, terrace, etc.): Depres	ssion			e, convex, none):					
Slope (%): 0 Lat: 44.991312		Long:	-93.00059						
Soil Map Unit Name Aquolls and histosols		<u> </u>		Classification:	PEMC				
Are climatic/hydrologic conditions of the site typical for	r this time o	f the vear?		f no, explain in remarks	<u> </u>				
	ogy	-		•	circumstances"				
Are vegetation , soil , or hydrol		naturally pro		Ale norman	present? Yes				
SUMMARY OF FINDINGS		7 1		(If needed, explain ar	ny answers in remarks.)				
Hydrophytic vegetation present? Y				, , ,	, ,				
Hydric soil present?	-	Is the sa	ampled area	a within a wetland?	Υ				
Indicators of wetland hydrology present?	-		tional wetlan						
, ,,,,,	-								
Remarks: (Explain alternative procedures here or in a separate report.)									
	Area is w	etter than n	ormal.						
VEGETATION Use scientific names of plant	ts.								
T 0. (5) (5)	Absolute	Dominan	Indicator	Dominance Test Wo					
Tree Stratum (Plot size: 30')	% Cover 50	-	Staus FACW	Number of Dominant S that are OBL, FACW, o	•				
1 Ulmus americana 2 Salix nigra	40	<u>Y</u> Y	OBL		``				
3			ODL	Total Number of Do Species Across all					
4				Percent of Dominant S					
5				that are OBL, FACW, o	•				
	90	= Total Cover							
Sapling/Shrub stratum (Plot size: 15')				Prevalence Index W	/orksheet				
1 Rhamnus cathartica	20	<u>Y</u>	FAC	Total % Cover of:					
2 Salix interior	10	Υ	FACW	OBL species 40					
3				FACW species 60 FAC species 20	<u> </u>				
5				FACU species 0					
	30	= Total Cover	-	UPL species 0					
Herb stratum (Plot size: 5')				Column totals 12	0 (A) 220 (B)				
1				Prevalence Index = E	3/A = 1.83				
2									
3				Hydrophytic Vegeta	tion Indicators:				
4					drophytic vegetation				
5				X Dominance test i					
6				X Prevalence index					
8					ptations* (provide n Remarks or on a				
9				supporting data i separate sheet)	II Remarks of on a				
10					rophytic vegetation*				
	0	= Total Cover	-	(explain)	1 7 3				
Woody vine stratum (Plot size: 30')				*Indicators of hydric soil	and wetland hydrology must be				
1				present, unless	disturbed or problematic				
2				Hydrophytic					
	0	= Total Cover	=	vegetation present?	Υ				
Pemarke: (Include photo numbers here or an a conserve	ate cheet)								
Remarks: (Include photo numbers here or on a separa	ate sneet)								

SOIL Sampling Point: C1 Wet

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	absence of indicators.)
Depth	Matrix		_	edox Feat				,
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-18	10YR 2/1	100		T			Muck	
	-			1				
				┼	ļ			
				<u> </u>				
				$ar{}$				
				1				
				1				
*Tupo: C = (Caracatration D	- Danlati	En DM - Doduc		. 148 - 1	Anakod S	Craina **I	Lasetian; DL = Doro Liping M = Matrix
	Concentration, D :	= Debieri	Ofi, Kivi – Neuuc	eu mana	(, IVIO – IV	/laskeu o		Location: PL = Pore Lining, M = Matrix Problematic Hydric Soils:
_			92	adv Glav	ad Matrix	· (Q1)		irie Redox (A16) (LRR K, L, R)
	isol (A1) ic Epipedon (A2)			ndy Gleye ndy Redo		((34)		ace (S7) (LRR K, L)
	ic Epipedon (AZ) ck Histic (A3)			indy Redd ripped Ma	. ,			ganese Masses (F12) (LRR K, L, R)
	ck riisiic (A3) Irogen Sulfide (A4	1\		amy Mucl			_	low Dark Surface (TF12)
	ntified Layers (A5	•		amy Muci amy Gley	-	. ,		olain in remarks)
	nilled Layers (A5 ₎ n Muck (A10))		amy Gley pleted Ma			Oniei (ev	Diam in remarks)
	oleted Below Dark	Surface		edox Dark				
	ck Dark Surface (· · · —	pleted Da		` '	*Indicators	of hydrophytic vegetation and weltand
	idy Mucky Minera			dox Depr				must be present, unless disturbed or
	n Mucky Peat or	. ,		dox Dop.	63310115	(10)	nyurorog,	problematic
	-	`				1		proxionistic
	Layer (if observe	ea):					والمحادثة ممثل	
Type:	· X.				-		Hydric soil _I	present? Y
Depth (inche	es):				-			
Remarks:								
HYDROLO								
Wetland Hy	drology Indicate	ors:						
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		Second	ary Indicators (minimum of two required
X Surface	` '				Fauna (B		S	urface Soil Cracks (B6)
	ter Table (A2)		<u>-</u>		uatic Plar			rainage Patterns (B10)
X Saturation	` '				n Sulfide	•		ry-Season Water Table (C2)
	arks (B1)				d Rhizosp	heres on		rayfish Burrows (C8)
	nt Deposits (B2)			_(C3)	(D - 4)	-l luan		aturation Visible on Aerial Imagery (C9)
	oosits (B3)		<u> </u>	_	e of Redu		· ·	tunted or Stressed Plants (D1)
	t or Crust (B4)				Iron Keau	iction in i		teomorphic Position (D2)
	osits (B5) on Visible on Aeria	ıl Imager	v (B7) —	_(C6) _Thin Mu	ck Surfac	ص (C7)		AC-Neutral Test (D5)
	Vegetated Conca				or Well Da	. ,		
	tained Leaves (B9				xplain in	, ,	1	
Field Obser	•	,	_		.лрічіі і	Romana	'	
Surface wat		Yes	X No		Depth (i	nchae).	Surface	
Water table		Yes	X No		Depth (i		0	Indicators of wetland
Saturation p	•	Yes	X No		Depth (i		0	hydrology present? Y
	pillary fringe)							
		m dalide	e monitoring we	ll aerial r	hotos n	revious ir	nspections), if availa	ahle [.]
Describe rec	orded data (Stree	aiii gaugi	s, monitoring we	ii, a c iiai p	motos, p	i evious ii	ispections), ii availa	able.
Remarks:								

Project/Site Hillcrest Redevelopment	City/0	County:	St. Pau	Sampling I	Date: 4/22/20)			
Applicant/Owner: St. Paul Port Authority		State:	MN	Sampling F	Point: E1 Up				
Investigator(s): Dustin S.		Section	on, Township	o, Range:	S23, T29, R22				
Landform (hillslope, terrace, etc.): Hillslop	е			e, convex, none):					
Slope (%): 5 Lat: 44.986135		Long:	-93.00628	32 Datum:					
Soil Map Unit Name Aquolls and histosols			NWI (Classification:	PEMB				
Are climatic/hydrologic conditions of the site typical for the	his time o	f the year?	N (I	f no, explain in rema	rks)				
Are vegetation X , soil , or hydrolog	ЗУ	significantly	disturbed?	Are "norm:	al circumstances"				
		naturally pro	oblematic?	7 0	present? Y	es			
SUMMARY OF FINDINGS				(If needed, explain	any answers in rema	arks.)			
Hydrophytic vegetation present? Y									
Hydric soil present? N	Is the sa	ampled area	a within a wetland?	N					
Indicators of wetland hydrology present?		f yes, op	tional wetlan	d site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)									
плетнатко. (шлунатт апетнатіче рітосечитео пете от ті а осрагате теротт.)									
A	rea is w	etter than n	ormal.						
VECTATION Lies esignific pages of plants									
VEGETATION Use scientific names of plants		Di	Indicator	Dominance Test \	Workshoot				
-	Absolute % Cover	Dominan t Species	Staus	Number of Dominan					
1	70 00101	Coposico	Otado	that are OBL, FACW	•	(A)			
2				Total Number of		- ` ′			
3				Species Across	all Strata: 1	(B)			
4				Percent of Dominan	ıt Species	-			
5				that are OBL, FACW	/, or FAC: 100.00%	_(A/B)			
0 - 1 - (0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	0	= Total Cover	-	D	Maria di La di				
Sapling/Shrub stratum (Plot size: 15')				Prevalence Index Total % Cover of:	worksneet				
				OBL species	0 x 1 = 0				
3				FACW species	$\frac{0}{0}$ x 2 = $\frac{0}{0}$	-			
4				· -	95 x 3 = 285	-			
5				FACU species	5 x 4 = 20	_			
_	0	=Total Cover	-	UPL species	0 x 5 = 0	_			
Herb stratum (Plot size: 5')					100 (A) 305	_(B)			
1 Poa pratensis	95	<u>Y</u>	FAC	Prevalence Index =	= B/A = 3.05	_			
2 Cirsium arvense	3	N	FACU	Hadaada C. W.	4-4				
3 Arctium minus	2	N	FACU		etation Indicators: hydrophytic vegetation	n			
5				X Dominance tes		II.			
6				Prevalence inc					
7				Morphogical ad	daptations* (provide				
8					a in Remarks or on a				
9				separate sheet	-				
10	100			-	drophytic vegetation*	ť			
Woody vine stratum (Plot size: 30')	100	=Total Cover	•	(explain)					
Woody vine stratum (Plot size: 30')				•	soil and wetland hydrology ss disturbed or problematio				
				Hydrophytic	ss disturbed of problematic				
	0	= Total Cover	-	vegetation					
				present?	<u>Y</u>				
Remarks: (Include photo numbers here or on a separate	e sheet)								

SOIL Sampling Point: E1 Up

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abs	ence of indicators.)
Depth	<u>Matrix</u>		Red	lox Feat	<u>ures</u>			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-11	10YR 2/1	100					Loam	
11-15	10YR 2/1	100					Clay loam	
15-24	10YR 4/4	100					Clay Loam	
13-24	1011(4/4	100					Clay Loaili	
*T]	_ D1-#		- I N / - 4	MC - N	1 l l C	<u> </u>	ation DL - Dans Lining M - Matrix
		= Depleti	on, RM = Reduce	ed Matrix	, MS = N	nasked S		ation: PL = Pore Lining, M = Matrix
_	oil Indicators:		0	-1 01	!	. (04)		oblematic Hydric Soils:
	tisol (A1)				ed Matrix	(54)		Redox (A16) (LRR K, L, R)
	tic Epipedon (A2)			dy Redo	. ,			(S7) (LRR K, L) ese Masses (F12) (LRR K, L, R)
	ck Histic (A3)	4)		oped Ma	. ,	-1 (54)		
	drogen Sulfide (A				ky Minera			Dark Surface (TF12)
	atified Layers (A5)			ed Matrix		Other (explai	n in remarks)
	m Muck (A10)				atrix (F3)			
	oleted Below Dark				Surface	` '		
	ck Dark Surface (,			rk Surfa	, ,		nydrophytic vegetation and weltand
	ndy Mucky Minera			lox Depr	essions	(F8)	hydrology mu	st be present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)					problematic
Restrictive	Layer (if observe	ed):						
Type:							Hydric soil pre	sent? N
Depth (inche	es):							
Remarks:					_			
HYDROLO	ngy							
	drology Indicate	re.						
_			magninadi abaali	all that a			0	In Proceedings (Colored to Colored to Colore
		or one is	required; check			40)		Indicators (minimum of two required)
	Water (A1)				Fauna (B	•		ace Soil Cracks (B6)
	ater Table (A2)				uatic Plar	. ,		nage Patterns (B10)
Saturation						Odor (C	<u> </u>	Season Water Table (C2)
	larks (B1) nt Deposits (B2)				Rnizosp	neres on		fish Burrows (C8) ration Visible on Aerial Imagery (C9)
	posits (B3)			(C3)	o of Pod	uced Iron		ted or Stressed Plants (D1)
	at or Crust (B4)						· · ·	morphic Position (D2)
	posits (B5)			(C6)	ion Reut	iction in i		-Neutral Test (D5)
	on Visible on Aeria	al Imager	/ (B7)	` '	ck Surfac	e (C7)	FAC-	-Neutral Test (D5)
	/ Vegetated Conca	• •	, ,		or Well Da			
	tained Leaves (B9					Remarks	.)	
		,		Other (L	лріант ін	TCHIAIRS	<u>''</u>	
Field Obser		V	NI.	V	Dorth /	nobes\:		
Surface wat		Yes	No	X	Depth (i			Indicators of wetland
Water table Saturation p	•	Yes Yes	No	$\frac{x}{x}$	Depth (i	-		hydrology present?
	pillary fringe)	res			Depth (i	nches).		nydrology present?
<u>`</u>					l4- ·			
Describe red	corded data (strea	am gaug	e, monitoring well	, aeriai p	notos, p	revious i	nspections), if available	3 :
Remarks:								
i veilidi və.								

Project/Site Hillcrest Redevelopment City	y/County:	St. Pau	I Sampling Date	e: 4/22/20					
Applicant/Owner: St. Paul Port Authority	State:	MN							
Investigator(s): Dustin S.	Secti	on, Townshi	p, Range: S2						
Landform (hillslope, terrace, etc.): Depression			ve, convex, none):						
Slope (%): 0 Lat: 44.986135	Long:	-93.0062							
Soil Map Unit Name Aquolls and histosols	_		Classification:	PEMB					
Are climatic/hydrologic conditions of the site typical for this time	of the vear?		f no, explain in remarks)						
Are vegetation , soil , or hydrology	•	/ disturbed?	Are "normal cir						
Are vegetation , soil , or hydrology	naturally pr		Ale normal cii	present? Yes					
SUMMARY OF FINDINGS	,		(If needed, explain any	· —					
Hydrophytic vegetation present?			, , ,	,					
Hydric soil present?	Is the s	ampled area	a within a wetland?	Υ					
Indicators of wetland hydrology present?		tional wetlar							
, 3,1									
Remarks: (Explain alternative procedures here or in a separate report.)									
Area is v	wetter than r	normal.							
VEGETATION Use scientific names of plants.									
Absolute		Indicator	Dominance Test Wor						
Tree Stratum (Plot size: 30') % Cover	r t Species	Staus	Number of Dominant Sp that are OBL, FACW, or						
				 ` ' '					
3			Total Number of Dom Species Across all S						
4			Percent of Dominant Sp						
5			that are OBL, FACW, or						
	= Total Cove	r							
Sapling/Shrub stratum (Plot size: 15')	_		Prevalence Index Wo	rksheet					
1			Total % Cover of:						
2			OBL species 0	x 1 = 0					
3			FACW species 100 FAC species 0	$\begin{array}{ccc} x 2 = & 200 \\ x 3 = & 0 \end{array}$					
5			FACU species 0	$- x 4 = \frac{0}{0}$					
	= Total Cove		UPL species 0	-x = -x = 0					
Herb stratum (Plot size: 5')	_		Column totals 100	(A) 200 (B)					
1 Phalaris arundinacea 100	Υ	FACW	Prevalence Index = B/A	A = 2.00					
2									
3			Hydrophytic Vegetati	on Indicators:					
4			Rapid test for hydro						
5			X Dominance test is						
			X Prevalence index is						
8			Morphogical adapt supporting data in						
9			supporting data in separate sheet)	Remarks of on a					
10			Problematic hydro	phytic vegetation*					
100	= Total Cove	r	(explain)	, 3					
Woody vine stratum (Plot size: 30')	_		*Indicators of hydric soil ar	nd wetland hydrology must be					
1			present, unless dis	sturbed or problematic					
2			Hydrophytic						
0	= Total Cove	r	vegetation present?	Υ					
Demarks: (Include photo numbers here as an a congrete sheet)									
Remarks: (Include photo numbers here or on a separate sheet)									

SOIL Sampling Point: E1 Wet

	cription: (Descr	ibe to th	e depth needed	to aocu	ment tne	muicat	or or confirm the ab	sence of indicators.)						
Depth	<u>Matrix</u>		Re	dox Feat	ures									
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks						
0-13	10YR 2/1	100					Loam							
13-19	10YR 2/1	100					Clay loam							
19-24	10YR 5/1	95	10YR 4/6	5	С	М	Clay Loam							
			1011/4/0	3	C	IVI	Clay Loaili							
30-36	10YR 4/3	100												
*T 0 0	<u> </u>	D - 1 - 1	l DM D lo	1.84 - 1-2-	NO 1	4	++1	office DL D collision M Market						
		= Depleti	ion, RM = Reduc	ed Matrix	, MS = N	lasked S		cation: PL = Pore Lining, M = Matrix						
	oil Indicators:		0		! 1.4 4 1	(04)		roblematic Hydric Soils:						
	tisol (A1)			ndy Gleye		(54)		e Redox (A16) (LRR K, L, R)						
	tic Epipedon (A2)			ndy Redo	. ,			e (S7) (LRR K, L) nese Masses (F12) (LRR K, L, R)						
	ck Histic (A3)	4)		pped Ma	. ,	-I /E4)								
	lrogen Sulfide (A atified Layers (A5			my Mucl	-			v Dark Surface (TF12)						
	• •)		my Gley			Other (expla	in in remarks)						
	m Muck (A10)	Curfosa		oleted Ma	, ,									
	oleted Below Dark			dox Dark		, ,	±1 1							
	ck Dark Surface (,		oleted Da		. ,		hydrophytic vegetation and weltand						
	idy Mucky Minera			dox Depr	essions ((۲8)	nyarology mi	ust be present, unless disturbed or						
5 cr	m Mucky Peat or	Peat (53	')					problematic						
Restrictive	Layer (if observe	ed):												
Type:					_		Hydric soil pro	esent? Y						
Depth (inche	es):				_									
Remarks:														
HYDROLO	ngv													
		re:												
						Wetland Hydrology Indicators:								
		or one is		- 11 414			0 1							
	Water (A1)		required; check			40)		y Indicators (minimum of two required)						
			required; check	Aquatic	Fauna (B	,	Suri	ace Soil Cracks (B6)						
	iter Table (A2)		required; check	Aquatic True Aq	Fauna (B uatic Plar	nts (B14)	Surf Drai	ace Soil Cracks (B6) nage Patterns (B10)						
Saturatio	on (A3)		required; check	Aquatic True Aqu Hydroge	Fauna (B uatic Plar n Sulfide	nts (B14) Odor (C1	Surf — Drai)Dry-	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)						
Water M	on (A3) arks (B1)		required; check	Aquatic True Aqu Hydroge Oxidized	Fauna (B uatic Plar n Sulfide	nts (B14) Odor (C1	Suri	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8)						
Water M Sedimen	on (A3) arks (B1) nt Deposits (B2)		required; check	Aquatic True Aqu Hydroge Oxidized (C3)	Fauna (B uatic Plar n Sulfide I Rhizosp	nts (B14) Odor (C1 heres on	Surf 	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)						
Water M Sedimen Drift Dep	on (A3) larks (B1) at Deposits (B2) posits (B3)		required; check	Aquatic True Aqu Hydroge Oxidized (C3) Presence	Fauna (B uatic Plar n Sulfide I Rhizosp e of Redu	nts (B14) Odor (C1 heres on uced Iron	Surface	race Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)						
Water M Sedimen Drift Dep Algal Ma	on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4)		required; check	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I	Fauna (B uatic Plar n Sulfide I Rhizosp e of Redu	nts (B14) Odor (C1 heres on uced Iron	Surface	race Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) umorphic Position (D2)						
Water M Sedimen Drift Dep Algal Ma Iron Dep	on (A3) larks (B1) at Deposits (B2) posits (B3)			Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6)	Fauna (B uatic Plar n Sulfide I Rhizosp e of Redu ron Redu	ots (B14) Odor (C1) heres on uced Iron uction in T	Surface	race Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)						
Water M Sedimen Drift Dep Algal Ma Iron Dep Inundation	on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	al Imagery	y (B7)	Aquatic True Aqu Hydroge Oxidized (C3) Presence Recent I (C6) Thin Mu	Fauna (B uatic Plar n Sulfide I Rhizosp e of Redu ron Redu	ots (B14) Odor (C1) heres on uced Iron uction in T	Surface	race Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) umorphic Position (D2)						
Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio	on (A3) larks (B1) Int Deposits (B2) loosits (B3) Int or Crust (B4) loosits (B5) In Visible on Aeria In Vegetated Conca	al Imagery ave Surta	y (B7)	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C	Fauna (B uatic Plar n Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da	ots (B14) Odor (C1) heres on uced Iron uction in T e (C7) ata (D9)	Surface Surface	race Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) umorphic Position (D2)						
Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely Water-St	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria v Vegetated Concatained Leaves (B9	al Imagery ave Surta	y (B7)	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C	Fauna (B uatic Plar n Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da	ots (B14) Odor (C1) heres on uced Iron uction in T	Surface Surface	race Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) umorphic Position (D2)						
Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely Water-Si	on (A3) farks (B1) for Deposits (B2) posits (B3) at or Crust (B4) posits (B5) for Visible on Aeria v Vegetated Concatained Leaves (B9) rvations:	al Imagery ave Surta)	y (B7) ce (B8)	Aquatic True Aquatic Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge of	Fauna (Buatic Plans Sulfide I Rhizospe of Reduron Reduck Surfacer Well Da	nts (B14) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks	Surface Surface	race Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) umorphic Position (D2)						
Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely Water-St Field Obser	on (A3) farks (B1) for Deposits (B2) posits (B3) at or Crust (B4) posits (B5) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Properties (B9) for Visible on Aeria for Properties (B9) for Visible on Aeria for Properties (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9)	al Imagery ave Surta) Yes	y (B7) ce (B8)	Aquatic True Aquatic Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge of Other (E	Fauna (Buatic Plans of Sulfide I Rhizospe of Reductor Reductor Well Daixplain in Depth (i	nts (B14) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks)	Surface Surface	race Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2) C-Neutral Test (D5)						
Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely Water-St Field Obser Surface wate Water table	on (A3) farks (B1) for Deposits (B2) posits (B3) at or Crust (B4) posits (B5) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Vegetated Concatained Leaves (B9) for Visible on Aeria for Present?	al Imagery ave Surfa) Yes Yes	y (B7) ce (B8) No	Aquatic True Aquatic Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge of	Fauna (Buatic Plar In Sulfide If Rhizospee of Reductor Reductor Well Data Explain in Depth (in Depth (in Depth (in Depth (in Depth (in Support (in Sup	nts (B14) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches):	Surface Surf	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2) C-Neutral Test (D5) Indicators of wetland						
Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely Water-Si Field Obser Surface wate Water table Saturation p	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria vegetated Concatained Leaves (B9 rvations: er present? present?	al Imagery ave Surta) Yes	y (B7) ce (B8)	Aquatic True Aquatic Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge of Other (E	Fauna (Buatic Plans of Sulfide I Rhizospe of Reductor Reductor Well Daixplain in Depth (i	nts (B14) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches):	Surface Surface	race Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) morphic Position (D2) C-Neutral Test (D5)						
Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Water-Si Field Obser Surface wate Water table Saturation p (includes ca	on (A3) larks (B1) larks (B3) larks (B3) lat or Crust (B4) loosits (B5) lon Visible on Aeria lat vegetated Concatained Leaves (B9 le	al Imagery ave Surfac) Yes Yes Yes	y (B7) ce (B8) No No No No	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C Other (E	Fauna (Buatic Plar In Sulfide I Rhizospee of Reduck Surfac In Well Dates In Medical In Depth (in Depth (in Depth (in Depth (in Depth (in In	nts (B14) Odor (C1 heres on uced Iron action in T e (C7) ata (D9) Remarks nches): nches):	Surface Surface	Indicators of wetland hydrology present?						
Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Water-Si Field Obser Surface wate Water table Saturation p (includes ca	on (A3) larks (B1) larks (B3) larks (B3) lat or Crust (B4) loosits (B5) lon Visible on Aeria lat vegetated Concatained Leaves (B9 le	al Imagery ave Surfac) Yes Yes Yes	y (B7) ce (B8) No No No No	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C Other (E	Fauna (Buatic Plar In Sulfide I Rhizospee of Reduck Surfac In Well Dates In Medical In Depth (in Depth (in Depth (in Depth (in Depth (in In	nts (B14) Odor (C1 heres on uced Iron action in T e (C7) ata (D9) Remarks nches): nches):	Surface Surf	Indicators of wetland hydrology present?						
Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Water-Si Field Obser Surface wate Water table Saturation p (includes ca	on (A3) larks (B1) larks (B3) larks (B3) lat or Crust (B4) loosits (B5) lon Visible on Aeria lat vegetated Concatained Leaves (B9 le	al Imagery ave Surfac) Yes Yes Yes	y (B7) ce (B8) No No No No	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C Other (E	Fauna (Buatic Plar In Sulfide I Rhizospee of Reduck Surfac In Well Dates In Medical In Depth (in Depth (in Depth (in Depth (in Depth (in In	nts (B14) Odor (C1 heres on uced Iron action in T e (C7) ata (D9) Remarks nches): nches):	Surface Surface	Indicators of wetland hydrology present?						
Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Water-Si Field Obser Surface wate Water table Saturation p (includes ca	on (A3) larks (B1) larks (B3) larks (B3) lat or Crust (B4) loosits (B5) lon Visible on Aeria lat vegetated Concatained Leaves (B9 le	al Imagery ave Surfac) Yes Yes Yes	y (B7) ce (B8) No No No No	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C Other (E	Fauna (Buatic Plar In Sulfide I Rhizospee of Reduck Surfac In Well Dates In Medical In Depth (in Depth (in Depth (in Depth (in Depth (in In	nts (B14) Odor (C1 heres on uced Iron action in T e (C7) ata (D9) Remarks nches): nches):	Surface Surface	Indicators of wetland hydrology present?						
Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Sparsely Water-Si Field Obser Surface wate Water table Saturation p (includes ca) Describe reco	on (A3) farks (B1) farks (B2) for (B3) for (B3) for (B4) for (B4) for (B5) for (B4)	al Imagery ave Surta) Yes Yes Yes	y (B7) ce (B8) No No X No e, monitoring wel	Aquatic True Aqi Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C Other (E X X	Fauna (Buatic Plarin Sulfide I Rhizospe of Reduck Surface Well Daixplain in Depth (i Depth (i bhotos, pi	nts (B14) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches):	Surface Surfac	Indicators of wetland hydrology present?						
Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Sparsely Water-Si Field Obser Surface wate Water table Saturation p (includes ca) Describe reco	on (A3) farks (B1) farks (B2) for (B3) for (B3) for (B4) for (B4) for (B5) for (B4)	al Imagery ave Surta) Yes Yes Yes	y (B7) ce (B8) No No No No	Aquatic True Aqi Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C Other (E X X	Fauna (Buatic Plarin Sulfide I Rhizospe of Reduck Surface Well Daixplain in Depth (i Depth (i bhotos, pi	nts (B14) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches):	Surface Surfac	Indicators of wetland hydrology present?						

Project/Site Hillcrest Redevelopment	City/C	County:	St. Paul	Sampling I	Date: 4/22/20	
Applicant/Owner: St. Paul Port Authority	_	State:	MN	 Sampling F	Point: E2 Up	
Investigator(s): Dustin S.		Section	n, Township	, Range:	S23, T29, R22	
Landform (hillslope, terrace, etc.): Hillslope				e, convex, none):		
Slope (%): 8 Lat: 44.985173		Long:	-93.00659	Datum:		
Soil Map Unit Name Auburndale silt loam Auburndale silt lo	oam		NWI C	Classification:	PSSA	
Are climatic/hydrologic conditions of the site typical for this	s time of	the year?	N (I	no, explain in remar	rks)	
Are vegetation , soil , or hydrology	•	significantly	disturbed?	Are "norma	al circumstances"	
Are vegetation , soil , or hydrology		naturally pro	oblematic?	,	present? Yes	
SUMMARY OF FINDINGS				(If needed, explain	any answers in remarks	s.)
Hydrophytic vegetation present? N						
Hydric soil present? N		Is the sa	ampled area	within a wetland?	N	
Indicators of wetland hydrology present?		f yes, opt	tional wetlan	d site ID:		
Remarks: (Explain alternative procedures here or in a sep	narate re	nort)				
Tremains. (Explain alternative procedures here of in a sep	Jarato Top	5011.)				
Are	ea is we	etter than n	ormal.			
VECETATION Lies esignifican among of plants						
VEGETATION Use scientific names of plants.	osolute	Dominan	Indicator	Dominance Test \	Workshoot	
1		t Species	Staus	Number of Dominan		
1 Acer saccharinum	25	Y	FACW	that are OBL, FACW	•	١)
2				Total Number of		,
3				Species Across	all Strata: 2 (B	3)
4				Percent of Dominan	ıt Species	
5				that are OBL, FACW	/, or FAC: <u>50.00%</u> (A	√B)
	25 =	Total Cover		Duninglanda Indan	Manhahaat	
Sapling/Shrub stratum (Plot size: 15')				Prevalence Index Total % Cover of:	worksneet	
				OBL species	0 x 1 = 0	
3				· · · · · · · · · · · · · · · · · · ·	25 x 2 = 50	
4				FAC species	0 x 3 = 0	
5				· -	30 x 4 = 120	
	0 =	Total Cover	_	UPL species	0 x 5 = 0	
Herb stratum (Plot size: 5')					55 (A) 170 (B	3)
1 Arctium minus	30	<u> </u>	FACU	Prevalence Index =	= B/A = 3.09	
				Hardana bada Maria	. (- C L - D (
3					etation Indicators: hydrophytic vegetation	
5				Dominance tes		
6				Prevalence ind		
7				Morphogical ad	daptations* (provide	
8					a in Remarks or on a	
9				separate sheet	•	
10		 -		-	drophytic vegetation*	
Woody vine stratum (Plot size: 30')	30 =	Total Cover		(explain)		
Woody vine stratum (Plot size: 30')				•	soil and wetland hydrology mu ss disturbed or problematic	ıst be
				Hydrophytic	ss disturbed of problematic	
	0 =	Total Cover		vegetation		
				present?	<u>N</u>	
Remarks: (Include photo numbers here or on a separate s	sheet)					

SOIL Sampling Point: E2 Up

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abs	sence of indicators.)
Depth	<u>Matrix</u>		Red	lox Feat	<u>ures</u>			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-8	10YR 2/1	100					Loam	
8-17	10YR 3/2	100					Clay Laom	
17-24	10YR 4/4	100					Clay Laom	
17-24	101K 4/4	100					Clay Laoili	
*T 0 1	1	<u> </u>	D14 D 1				10 : 441	
	Concentration, D	= Deplet	on, RM = Reduce	ed Matrix	:, MS = N	lasked S		cation: PL = Pore Lining, M = Matrix
_	oil Indicators:		0		1.84.65	(0.4)		roblematic Hydric Soils:
	tisol (A1)				ed Matrix	(S4)		e Redox (A16) (LRR K, L, R)
	tic Epipedon (A2)			dy Redo	. ,			e (S7) (LRR K, L)
	ck Histic (A3)			oped Ma	. ,			ese Masses (F12) (LRR K, L, R)
	drogen Sulfide (A				ky Minera			/ Dark Surface (TF12)
	atified Layers (A5)			ed Matrix		Other (explain	in in remarks)
	m Muck (A10)				atrix (F3)			
	oleted Below Dark				Surface	. ,		
	ck Dark Surface (,			ırk Surfa	, ,		hydrophytic vegetation and weltand
	ndy Mucky Minera			lox Depr	essions	(F8)	hydrology mu	ust be present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)					problematic
Restrictive	Layer (if observe	ed):						
Type:							Hydric soil pre	esent? N
Depth (inche	es):				•			
Remarks:					-			
rtemants.								
HYDROLO	ncv							
_	drology Indicate							
	cators (minimum	of one is	required; check					/ Indicators (minimum of two required)
	Water (A1)				Fauna (B	•		ace Soil Cracks (B6)
	ater Table (A2)				uatic Plar	. ,		nage Patterns (B10)
Saturation						Odor (C		Season Water Table (C2)
	larks (B1)				Rhizosp	heres on		fish Burrows (C8)
	nt Deposits (B2)			(C3)				rration Visible on Aerial Imagery (C9)
	posits (B3)					uced Iron		ated or Stressed Plants (D1)
	at or Crust (B4)				ron Redu	iction in 1		morphic Position (D2)
	osits (B5)	llmagan	, (P7)	(C6)	- I- Of	- (07)	FAC	-Neutral Test (D5)
	on Visible on Aeria / Vegetated Conca	• •	, ,		ck Surfac			
					or Well Da		`	
water-S	tained Leaves (B9)		Other (E	xpiain in	Remarks	5)	
Field Obser								
Surface wat		Yes	No	X	Depth (i			
Water table	•	Yes	No	X	Depth (i	-		Indicators of wetland
Saturation p		Yes	No	X	Depth (i	nches):		hydrology present? N
<u>`</u>	pillary fringe)							
Describe red	corded data (strea	am gaug	e, monitoring well	, aerial p	hotos, p	revious i	nspections), if availabl	e:
D 1								
Remarks:								

Project/Site Hillcrest Redevelopment	City/C	County:	St. Paul	Sampling Dat	te: 4/22/20				
Applicant/Owner: St. Paul Port Authority	_	State:	MN	Sampling Poi					
Investigator(s): Dustin S.		Section	n, Township	n, Range:					
Landform (hillslope, terrace, etc.): Depression	on		•	e, convex, none):					
Slope (%): 0 Lat: 44.985186		Long:	-93.00648						
Soil Map Unit Name Aquolls and histosols		J		Classification:	PSSA				
Are climatic/hydrologic conditions of the site typical for th	is time of	the vear?		f no, explain in remarks)				
Are vegetation , soil , or hydrology		significantly		•	, circumstances"				
Are vegetation , soil , or hydrology		naturally pro		Ale normal c	present? Yes				
SUMMARY OF FINDINGS	' ——	, ,		(If needed, explain an	y answers in remarks.)				
Hydrophytic vegetation present?				, ,	,				
Hydric soil present?		Is the sa	ampled area	within a wetland?	Υ				
Indicators of wetland hydrology present?			tional wetlan						
, , , , , , , , , , , , , , , , , , , ,									
Remarks: (Explain alternative procedures here or in a separate report.)									
Ar	rea is we	etter than n	ormal.						
VEGETATION Use scientific names of plants.			-						
	bsolute	Dominan	Indicator	Dominance Test Wo					
Tree Stratum (Plot size: 30') % 1 Acer saccharinum	6 Cover 25	t Species Y	Staus FACW	Number of Dominant S	•				
2	25	·	FACW	that are OBL, FACW, o	 ` ' '				
3				Total Number of Do Species Across all					
4				Percent of Dominant S					
5				that are OBL, FACW, o	•				
	25 =	Total Cover							
Sapling/Shrub stratum (Plot size: 15')				Prevalence Index W	orksheet				
1 Acer saccharinum	10	<u> </u>	FACW	Total % Cover of:					
2				OBL species 0	x 1 = 0				
3				FACW species 60 FAC species 0	x 2 = 120 x 3 = 0				
5				FACU species 0	- x 4 = 0				
	10 =	Total Cover		UPL species 0	$x = \frac{1}{x} = $				
Herb stratum (Plot size: 5')				Column totals 60					
1 Phalaris arundinacea	25	Υ	FACW	Prevalence Index = B	/A = 2.00				
2									
3				Hydrophytic Vegeta	tion Indicators:				
4					Irophytic vegetation				
5				X Dominance test is					
6				X Prevalence index					
8				Morphogical adap	otations* (provide n Remarks or on a				
9				supporting data if	i Nemarks of on a				
10					ophytic vegetation*				
	25 =	Total Cover		(explain)	1 7 3				
Woody vine stratum (Plot size: 30')				*Indicators of hydric soil	and wetland hydrology must be				
1				present, unless d	isturbed or problematic				
2				Hydrophytic					
	0 =	Total Cover		vegetation present?	Υ				
Pemarke: (Include photo numbers here or on a constate	eheet)			<u></u>					
Remarks: (Include photo numbers here or on a separate	sileet)								

SOIL Sampling Point: E2 Wet

Profile Des	cription: (Descr	ibe to th	e depth needed	l to docu	ment the	e indicat	or or confirm the ab	osence of indicators.)			
Depth	Matrix			edox Feat							
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-7	10YR 2/1	100					Loam Muck				
7-18	10YR 2/1	100					Loam				
,	10111.2,1	100		+	 	1	Louin				
			<u> </u>	+	-						
				\bot							
				T							
				1							
*Type: C = (Concentration, D :	= Depleti	ion_RM = Reduc	 _ed Matrix	MS = N	Asked S	l Sand Grains **I c	ocation: PL = Pore Lining, M = Matrix			
	il Indicators:	- Debica	OII, INVI – INCUA	Cu Mana	i, ivio – ii	/laskou c		Problematic Hydric Soils:			
_	isol (A1)		Sa	ındy Gleye	od Matrix	(\$4)		ie Redox (A16) (LRR K, L, R)			
	ic Epipedon (A2)			indy Gleyo indy Redo		((04)		ce (S7) (LRR K, L)			
	ck Histic (A3)			ripped Ma	. ,			nese Masses (F12) (LRR K, L, R)			
	lrogen Sulfide (A	1)		amy Mucl	. ,		_	w Dark Surface (TF12)			
	atified Layers (A5	•		•	•	` ,		ain in remarks)			
	Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Other (explain in remarks)										
	Depleted Below Dark Surface (A11) Redox Dark Surface (F6)										
	ck Dark Surface (` ′	pleted Da		` '	*Indicators of	hydrophytic vegetation and weltand			
	dy Mucky Minera			dox Depr		. ,		nust be present, unless disturbed or			
	5 cm Mucky Peat or Peat (S3) problematic										
	Layer (if observe	`				1		<u> </u>			
Type:	Layer (II Observ	euj.					Hydric soil pr	resent? Y			
	76 J.				-		riyuno son pi				
	Depth (inches):										
Remarks:											
	201/										
HYDROLO											
_	drology Indicato										
	cators (minimum	of one is	required; check				· · · · · · · · · · · · · · · · · · ·	ry Indicators (minimum of two required)			
X Surface	` '		_		Fauna (B			face Soil Cracks (B6)			
	ter Table (A2)		_		uatic Plar			ninage Patterns (B10)			
X Saturation	` '					Odor (C	· ·	/-Season Water Table (C2)			
	arks (B1)				ı Knizosp	neres on		ayfish Burrows (C8) curation Visible on Aerial Imagery (C9)			
	nt Deposits (B2) posits (B3)		_	(C3)	e of Redi	uced Iron		inted or Stressed Plants (D1)			
	it or Crust (B4)		_	_			· ·	omorphic Position (D2)			
	osits (B5)			(C6)	iioii itout			C-Neutral Test (D5)			
	on Visible on Aeria	l Imagery	/ (B7)	_ ` ′	ck Surfac	ce (C7)		0 110dilai 100t (D0)			
Sparsely	Vegetated Conca	ve Surta	ce (B8)		or Well Da	. ,					
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)				
Field Obser	vations:										
Surface wat		Yes	X No		Depth (i	inches):	Surface				
Water table		Yes	X No		Depth (i		0	Indicators of wetland			
Saturation p	resent?	Yes	X No		Depth (i	inches):	0	hydrology present? Y			
(includes ca	pillary fringe)										
Describe red	corded data (strea	am gauge	e, monitoring we	II, aerial p	hotos, p	revious ii	nspections), if availab	ole:			
		-					•				
Remarks:											

Project/Site Hillcrest Redevelopment	City/C	County:	St. Paul	Sampling Date	e: 4/22/20	
Applicant/Owner: St. Paul Port Authority		State:	MN			
Investigator(s): Dustin S.			n. Townshir	o, Range: S		
Landform (hillslope, terrace, etc.): Hillslope	e		-	e, convex, none):		
Slope (%): 10 Lat: 44.983149		Long:	-93.00781			
Soil Map Unit Name Kingsley Sandy Loam				Classification:	PSSA	
Are climatic/hydrologic conditions of the site typical for the	nis time of	the year?		f no, explain in remarks)		
Are vegetation X , soil , or hydrolog						
		naturally pro		Are "normal ci	rcumstances" present? No	
Are vegetation, soil, or hydrolog SUMMARY OF FINDINGS	<u> </u>	naturally pro	oblemanc?	(If needed, explain any	· —	
Hydrophytic vegetation present?				(II lieeded, explain any	answers in remarks.)	
<u> </u>		Is the sampled area within a wetland? N				
			-		<u>N</u>	
Indicators of wetland hydrology present? N		i yes, opi	tional wetlan	a site iD:		
Remarks: (Explain alternative procedures here or in a se	eparate re _l	port.)				
Area is we	attor than	n normal. A	roa ie mov	wod		
Alea is we	ellei liiai	i iloiiliai. A	ilea is iliov	veu.		
VEGETATION Use scientific names of plants.						
A	Absolute	Dominan	Indicator	Dominance Test Wor	ksheet	
Tree Stratum (Plot size: 30') %	% Cover	t Species	Staus	Number of Dominant Sp		
1				that are OBL, FACW, or	FAC: 1 (A)	
2				Total Number of Don		
3				Species Across all S	``´	
				Percent of Dominant Sp		
5	0 =	Total Cover		that are OBL, FACW, or	FAC: 50.00% (A/B)	
Sapling/Shrub stratum (Plot size: 15')		· Total Cover		Prevalence Index Wo	rkshoot	
1	80	Υ		Total % Cover of:	rksneet	
				OBL species 0	x 1 = 0	
3				FACW species 0	x 2 = 0	
4				· · · · · · · · · · · · · · · · · · ·	x 3 = 300	
5				FACU species 0	x 4 = 0	
	80 =	Total Cover		UPL species 0	x 5 = 0	
Herb stratum (Plot size: 5')				Column totals 100	(A) 300 (B)	
1 Poa pratensis	100	Υ	FAC	Prevalence Index = B/A	A = 3.00	
2						
3				Hydrophytic Vegetati		
4				Rapid test for hydr		
5				Dominance test is		
0				X Prevalence index i		
8				Morphogical adapt		
9				supporting data in separate sheet)	Remarks of on a	
10 -				Problematic hydro	nhytic vegetation*	
	100 =	Total Cover		(explain)	priyac vegetation	
Woody vine stratum (Plot size: 30')				 · · · ·	nd wetland hydrology must be	
1				•	sturbed or problematic	
2	-			Hydrophytic		
	0 =	Total Cover		vegetation	V	
				present?	<u>Y</u>	
Remarks: (Include photo numbers here or on a separate	sheet)					

SOIL Sampling Point: F1 Up

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abse	nce of indicators.)
Depth	<u>Matrix</u>		Red	dox Feat	<u>ures</u>			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-5	10YR 2/1	100					Loam	
5-11	10YR 2/1	80					Loam	
•	10YR 4/4	20					Loam	+
44.04								
11-24	10YR 4/4	100					Clay loam	
*Type: C = (Concentration D	- Depleti	on, RM = Reduce	d Matrix	MS - N	lacked S	I Sand Grains **Loca	tion: PL = Pore Lining, M = Matrix
	oil Indicators:	- Depleti	on, Rivi – Reduce	u Mali IX	., IVIO – IV	naskeu S		blematic Hydric Soils:
_	tisol (A1)		San	dy Glave	ed Matrix	(84)		Redox (A16) (LRR K, L, R)
	tic Epipedon (A2)			idy Gleye idy Redo		(34)		S7) (LRR K, L)
	ck Histic (A3)			oped Ma	. ,			se Masses (F12) (LRR K, L, R)
	lrogen Sulfide (A	1)		•	ky Minera	al (F1)		Dark Surface (TF12)
	atified Layers (A5			-	ed Matrix		Other (explain	
	n Muck (A10)	,			atrix (F3)		Other (explain	iii leiliaiks)
	oleted Below Dark	Surface			Surface			
	ck Dark Surface (rk Surfa	` '	*Indicators of hy	drophytic vegetation and weltand
	idy Mucky Minera	,			essions	. ,		t be present, unless disturbed or
	n Mucky Peat or	. ,		юх Берг	03310113	(10)	nydrology mus	problematic
	•	`	,			T		problemate
	Layer (if observe	ed):					111.1	10 N
Type:					•		Hydric soil pres	ent? N
Depth (inche	es):				-			
Remarks:								
HYDROLO	OGY							
Wetland Hy	drology Indicate	ors:						
Primary Indi	cators (minimum	of one is	required; check a	all that a	pply)		Secondary I	ndicators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surfac	e Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)	Draina	age Patterns (B10)
Saturation	on (A3)			Hydroge	n Sulfide	Odor (C	1)Dry-S	eason Water Table (C2)
	arks (B1)			Oxidized	Rhizosp	heres on		sh Burrows (C8)
	nt Deposits (B2)			(C3)				ation Visible on Aerial Imagery (C9)
	oosits (B3)					uced Iron	` '	ed or Stressed Plants (D1)
	at or Crust (B4)				ron Redu	iction in T		orphic Position (D2)
	osits (B5) on Visible on Aeria	l Imagan	, (B7)	(C6)	-l. C	- (07)	FAC-N	leutral Test (D5)
	Vegetated Conca		` '		ck Surfac			
	tained Leaves (B9				or Well Da		١	
)		Other (E	хріані ін	Remarks	· · · · · · · · · · · · · · · · · · ·	
Field Obser		V	NI.	V	D			
Surface wate		Yes	No	X	Depth (i			ndicators of wetland
Water table Saturation p	•	Yes Yes	No No	$\frac{\lambda}{X}$	Depth (i	-	'	hydrology present? N
•	pillary fringe)	165			Deptii (i	1101165).		mydrology present:
<u> </u>		m aqua	monitoring wall	oorial n	hotoo n	rovious i	annotiona) if available	
Describe rec	corded data (Strea	am gauge	e, monitoring weil	, аепагр	motos, p	revious ii	nspections), if available:	
Remarks:								

Project/Site Hillcrest Redevelopment	City/County:	St. Paul	Sampling Date:	4/22/20		
Applicant/Owner: St. Paul Port Authority	State:	MN	Sampling Point:	F1 Wet		
Investigator(s): Dustin S.	Sect	on, Township,	Range: S23,	T29, R22		
Landform (hillslope, terrace, etc.): Depression	Localı	elief (concave	, convex, none):	Concave		
Slope (%): 0 Lat: 44.983149	Long:	-93.007816	B Datum:			
Soil Map Unit Name Auburndale silt loam Auburndale silt loam		NWI CI	assification:	PSSA		
Are climatic/hydrologic conditions of the site typical for this tir	ne of the year?	N (If r	no, explain in remarks)			
Are vegetation , soil , or hydrology	=	y disturbed?	Are "normal circur	nstances"		
Are vegetation , soil , or hydrology		oblematic?	7 TO HOITHAI OILOUI	present? Yes		
SUMMARY OF FINDINGS			(If needed, explain any an	· —		
Hydrophytic vegetation present?			· · · · · · · · · · · · · · · · · · ·	,		
Hydric soil present?	Is the s	ampled area	within a wetland?	Υ		
Indicators of wetland hydrology present?		otional wetland				
Remarks: (Explain alternative procedures here or in a separa	ite report.)					
Area	is wetter than	normal.				
VEGETATION Use scientific names of plants.			· · · · · · · · · · · · · · · ·			
Absol		maioator	Dominance Test Worksh			
Tree Stratum (Plot size: 30') % Co	ver t Species		Number of Dominant Specie that are OBL, FACW, or FAC			
2		 '	Total Number of Domina	``		
3			Species Across all Strata			
4			Percent of Dominant Specie			
5			that are OBL, FACW, or FAC			
0	= Total Cove					
Sapling/Shrub stratum (Plot size: 15')			Prevalence Index Works	heet		
1 Salix interior 80	<u> </u>		Total % Cover of:			
2			· · · · · · · · · · · · · · · · · · ·	1 = 0		
3			FACW species $\begin{array}{ccc} 80 & x \\ FAC \text{ species} & 0 & x \\ \end{array}$	2 = <u>160</u> 3 = 0		
5		FACU species $0 \times 4 = 0$				
80	= Total Cove			5 = 0		
Herb stratum (Plot size: 5')			Column totals 80 (A	A) 160 (B)		
1			Prevalence Index = B/A =	2.00		
2						
3			Hydrophytic Vegetation			
4		.	Rapid test for hydroph	-		
5		.	X Dominance test is >50			
6			X Prevalence index is ≤3			
\ \frac{7}{9}			Morphogical adaptatio			
9			supporting data in Rer separate sheet)	narks or on a		
10			Problematic hydrophyt	tic vegetation*		
	= Total Cove	r	(explain)	regetation		
Woody vine stratum (Plot size: 30')		'	*Indicators of hydric soil and w	etland hydrology must be		
1			present, unless disturb			
2			Hydrophytic			
0	= Total Cove	r	vegetation present? Y			
	. (1)		present:	_		
Remarks: (Include photo numbers here or on a separate she	et)					

SOIL Sampling Point: F1 Wet

Profile Desc	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	<u>Matrix</u>		Red	lox Feat	<u>ures</u>						
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-14	10YR 2/1	100					Loam				
14-24	10YR 5/2	90	10YR 4/6	10	С	М	Clay Laom				
							,				
*Typo: C = C	`oncontration D	- Doploti	on, RM = Reduce	d Matrix	MC - N	lacked S	and Crains **Lo	cation: PL = Pore Lining, M = Matrix			
	il Indicators:	- Depleti	on, Rivi – Reduce	u Mailix	, IVIS – IV	iaskeu S		oblematic Hydric Soils:			
_	isol (A1)		Son	dy Clay	ed Matrix	(84)		Redox (A16) (LRR K, L, R)			
	ic Epipedon (A2)			dy Redo		(34)		e (S7) (LRR K, L)			
	ck Histic (A3)			oped Ma	. ,			ese Masses (F12) (LRR K, L, R)			
	rogen Sulfide (A	1)			ky Minera	al (F1)	_	Dark Surface (TF12)			
	tified Layers (A5)			-	-	. ,					
	2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6)										
	ck Dark Surface (· · · —		ırk Surfa	. ,	*Indicators of I	nydrophytic vegetation and weltand			
	dy Mucky Minera	•			essions (. ,		ist be present, unless disturbed or			
	n Mucky Peat or l	. ,		юх Верг	03310113 ((10)	nydrology me	problematic			
	<u> </u>	•	,					problemate			
	Layer (if observe	ed):						10 1			
Type:					•		Hydric soil pre	sent? Y			
Depth (inche	Depth (inches):										
Remarks:											
HYDROLO	OGY							_			
Wetland Hy	drology Indicate	rs:									
_			required; check a	all that a	(vlac		Secondary	/ Indicators (minimum of two required)			
	Water (A1)	<u> </u>	. oqu ou, oou		Fauna (B	13)	-	ace Soil Cracks (B6)			
	ter Table (A2)				uatic Plar			nage Patterns (B10)			
Saturation	` '			•		Odor (C1		Season Water Table (C2)			
	arks (B1)							fish Burrows (C8)			
Sedimen	t Deposits (B2)			(C3)	·			ration Visible on Aerial Imagery (C9)			
Drift Dep	osits (B3)			Presenc	e of Redu	iced Iron	(C4) Stun	ted or Stressed Plants (D1)			
Algal Ma	t or Crust (B4)			Recent I	ron Redu	ction in T	illed Soils X Geo	morphic Position (D2)			
	osits (B5)			(C6)			X FAC	-Neutral Test (D5)			
	on Visible on Aeria		. ,		ck Surfac	. ,					
	Vegetated Conca		ce (B8)		r Well Da	, ,					
Water-St	tained Leaves (B9)		Other (E	xplain in	Remarks)				
Field Obser	vations:										
Surface water		Yes	No No	Х	Depth (i						
Water table		Yes	No	Х	Depth (i			Indicators of wetland			
Saturation p		Yes	No	Х	Depth (i	nches):		hydrology present? Y			
	pillary fringe)										
Describe rec	orded data (strea	ım gauge	e, monitoring well	, aerial p	hotos, pi	revious ir	nspections), if availabl	e:			
D '											
	Remarks:										
		-		ater pur	nped in	. water	is no longer pump	ed in and the area is dryer than			
I it would h	nave been in th	ie past.									

Project/Site Hillcrest Redevelopment	City/	County:	St. Pau	I Sampling Date	e: 4/22/20				
Applicant/Owner: St. Paul Port Authority		State:	MN						
Investigator(s): Dustin S.		Section	on, Township	o, Range: S2	23, T29, R22				
Landform (hillslope, terrace, etc.): Hillso	pe	Local re	elief (concav	re, convex, none):					
Slope (%): 5 Lat: 44.982638		Long:	-93.0056	2 Datum:					
Soil Map Unit Name Cathro Muck			VWI (Classification:	PEMF				
Are climatic/hydrologic conditions of the site typical for	this time o	f the year?	N (I	f no, explain in remarks)					
Are vegetation , soil , or hydrolo	ogy								
Are vegetation , soil , or hydrold		naturally pro	oblematic?	7 to Horman on	present? Yes				
SUMMARY OF FINDINGS	·			(If needed, explain any	answers in remarks.)				
Hydrophytic vegetation present? Y									
Hydric soil present? N		Is the sa	ampled area	a within a wetland?	N				
Indicators of wetland hydrology present?		f yes, op	tional wetlar	nd site ID:					
Remarks: (Evoluin alternative procedures here or in a	Remarks: (Explain alternative procedures here or in a separate report.)								
internative procedures here or in a s	separate re	sport.)							
,	Area is w	etter than n	ormal.						
VECTATION III i - ntifi - n - n f n - n - nt									
VEGETATION Use scientific names of plants		Б :	La Parita	Dominance Test Wor	kohoot				
<u>Tree Stratum</u> (Plot size: 30')	Absolute % Cover	Dominan t Species	Indicator Staus						
1 Populus tremuloides	25	Y	FAC	Number of Dominant Sp that are OBL, FACW, or					
2				Total Number of Dom	``				
3				Species Across all S					
4				Percent of Dominant Sp	ecies				
5				that are OBL, FACW, or	FAC: 100.00% (A/B)				
	25	= Total Cover	=						
Sapling/Shrub stratum (Plot size: 15')				Prevalence Index Wo	rksheet				
1 Rhamnus cathartica	40	<u> </u>	FAC	Total % Cover of:	1 - 0				
2 3				OBL species 0 FACW species 0					
<u> </u>				· —	-x = 300				
5				FACU species 0	-x = 0				
	40	= Total Cover	-	UPL species 0	x 5 = 0				
Herb stratum (Plot size: 5')				Column totals 100	(A) 300 (B)				
1 Poa pratensis	35	Υ	FAC	Prevalence Index = B/	A = 3.00				
2									
3				Hydrophytic Vegetati					
4				Rapid test for hydro					
5				X Dominance test is					
0 7				X Prevalence index is					
8				Morphogical adapt supporting data in					
9				separate sheet)	Nemarks of on a				
10				Problematic hydro	ohytic vegetation*				
	35	= Total Cover	-	(explain)	, ,				
Woody vine stratum (Plot size: 30')				*Indicators of hydric soil ar	nd wetland hydrology must be				
1				· ·	turbed or problematic				
2				Hydrophytic					
	0	= Total Cover	-	vegetation present?	Υ				
Remarks: (Include photo numbers here or on a separa	to choot)				<u> </u>				
Remarks. (moldde prioto numbers nere or on a separa	te sneet)								

SOIL Sampling Point: H1 Up

Depth Matrix Redox Features Clork (Inches) Color (moist) % Type Loc* Texture Remarks	Profile Desc	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
0-9 10YR 2/1 100 Clay loam Clay lo	Depth	<u>Matrix</u>		Rec	lox Feat	ures						
9-16 10YR 2/1 100	(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. "Location: PL = Pore Lining, M = Matrix Hydric Soil Indicators:	0-9	10YR 2/1	100					Loam				
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. "Location: PL = Pore Lining, M = Matrix Hydric Soil Indicators:	9-16	10YR 2/1	100					Clay loam				
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Surface Water (A1) Aquatic Fauna (B13) Surface Soil Cracks (B6) High Water Table (A2) True Aquatic Plants (B14) Drainage Patterns (B10) Dry-Season Water Table (C2) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Water Stained Leaves (B9) Dother (Explain in Remarks) Field Observations: Surface Water greent? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hy	drology Indicate	rs:									
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Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Field Observations: Surface water present? Water table present? Yes No X Depth (inches): Water table present? No Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) Indicators of wetland hydrology present? N Indicators of wetland hydrology present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						-			, ,			
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Field Observations: Surface water present? Water table present? Yes No Saturation Visible on Aerial Imagery (B7) Surface water present? Water table present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		` ,			_		,		` ,			
Sediment Deposits (B2) (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Iron Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? N (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:												
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Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Field Observations: Surface water present? Water table present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						o of Redu	uced Iron					
Iron Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? N (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		, ,			•			` '	, ,			
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Field Observations: Surface water present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Sufface water present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? N (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						TOIT I COGG	icuon					
Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Saturation present? Yes No X Depth (inches): (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			ıl Imager	/ (B7)	_ ` ′	ck Surfac	ce (C7)	 ····	aud. 1551 (25)			
Field Observations: Surface water present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? N (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sparsely	Vegetated Conca	ve Surta	ce (B8)			. ,					
Surface water present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? No includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Water-St	lained Leaves (B9)		Other (E	xplain in	Remarks)				
Water table present? Yes No X Depth (inches): Saturation present? (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Field Obser	vations:		 _								
Saturation present? Yes No X Depth (inches): hydrology present? N (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Surface water	er present?	Yes	No	Χ							
(includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		•										
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			Yes	No	X	Depth (i	inches):	hy	/drology present? N			
Remarks:	Describe rec	orded data (strea	ım gauge	e, monitoring well	, aerial p	hotos, p	revious ir	nspections), if available:				
Remarks:												
Nemarks.	Remarks:											
	Nomania.											

Project/Site Hillcrest Redevelopment	City/0	County:	St. Paul	Sampling Date:	4/22/20	
Applicant/Owner: St. Paul Port Authority		State:	MN			
Investigator(s): Dustin S.		Section	on, Township	o, Range: S2		
Landform (hillslope, terrace, etc.): Depres	sion		-	e, convex, none):		
Slope (%): 0 Lat: 44.982638		Long:	-93.0056			
Soil Map Unit Name Cathro Muck		J		Classification:	PEMF	
Are climatic/hydrologic conditions of the site typical for	this time of					
Are vegetation , soil , or hydrolo						
Are vegetation , soil , or hydrolo		naturally pro		Ale normal one	present? Yes	
SUMMARY OF FINDINGS		, ,		(If needed, explain any	answers in remarks.)	
Hydrophytic vegetation present? Y				, , , ,		
Hydric soil present? Y		Is the sa	ampled area	a within a wetland?	Υ	
Indicators of wetland hydrology present?	•		. tional wetlan			
Remarks: (Explain alternative procedures here or in a s	separate re	eport.)				
	Area is w	etter than n	ormal.			
VEGETATION Use scientific names of plants					 	
T 01 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Absolute	Dominan	Indicator	Dominance Test Work		
Tree Stratum (Plot size: 30') 1 Populus tremuloides	% Cover 25	t Species Y	Staus FAC	Number of Dominant Spe that are OBL, FACW, or F		
2			170	Total Number of Domi	``	
3				Species Across all Str		
4				Percent of Dominant Spe		
5			-	that are OBL, FACW, or F		
	25 :	Total Cover	,			
Sapling/Shrub stratum (Plot size: 15')				Prevalence Index Wor	ksheet	
1	40	<u> </u>		Total % Cover of:		
2				·	x 1 = 45	
3					$\begin{array}{ccc} x & 2 & = & 0 \\ x & 3 & = & 75 \end{array}$	
5				FACU species 0	$x = \frac{73}{x} = \frac{73}{0}$	
	40 :	Total Cover		UPL species 0	x 5 = 0	
Herb stratum (Plot size: 5')				Column totals 70	(A) 120 (B)	
1 Carex lacustris	45	Υ	OBL	Prevalence Index = B/A	= 1.71	
2						
3				Hydrophytic Vegetation		
4				Rapid test for hydro		
5				X Dominance test is >		
7				X Prevalence index is		
8				Morphogical adapta supporting data in F		
9				separate sheet)	lemants of on a	
10				Problematic hydrop	hytic vegetation*	
	45 :	Total Cover		(explain)	, ,	
Woody vine stratum (Plot size: 30')				<u> </u>	d wetland hydrology must be	
1				present, unless distr Hydrophytic	urbed or problematic	
2	0 :	Total Cover	 _	vegetation		
	0 .	- I Olai GUVEI			Υ	
Remarks: (Include photo numbers here or on a separa	te sheet)					
' '	,					

SOIL Sampling Point: H1 Wet

Profile Des	cription: (Descri	ibe to th	e depth neede	d to docu	ment the	e indicat	or or confirm the abs	ence of indicators.)		
Depth	Matrix		R	edox Feat	ures			· ·		
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-8	10YR 2/1	100					Muck			
8-18	10YR 2/1	100					Loam			
0 10	1011(2/1	100					Louin			
± T 0 0		.			140 1					
	Concentration, D =	= Depleti	ion, RM = Redu	ced Matrix	(, MS = N	lasked S		ation: PL = Pore Lining, M = Matrix		
_	il Indicators:					(0.4)		oblematic Hydric Soils:		
	isol (A1)			ndy Gley		(S4)		Redox (A16) (LRR K, L, R)		
	ic Epipedon (A2)			ndy Redo	. ,			(S7) (LRR K, L)		
	ck Histic (A3)			ripped Ma	, ,		_	ese Masses (F12) (LRR K, L, R)		
	lrogen Sulfide (A	•		amy Muc	-	. ,		Dark Surface (TF12)		
	Stratified Layers (A5) 2 cm Muck (A10) Z Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Other (explain in remarks)									
	n Muck (A10)			•	. ,					
	leted Below Dark		· · · · —	edox Dark		. ,				
	ck Dark Surface (epleted Da				ydrophytic vegetation and weltand		
	dy Mucky Minera	. ,		edox Depr	essions ((F8)	hydrology mu	st be present, unless disturbed or		
5 cr	n Mucky Peat or	Peat (S3	5)					problematic		
Restrictive	Layer (if observe	ed):								
Type:							Hydric soil pres	sent? Y		
Depth (inche	es):				-					
Remarks:										
Ttoman.										
HYDROLO)GV									
	drology Indicato									
	cators (minimum	of one is	required; check					Indicators (minimum of two required)		
X Surface	` '				Fauna (B	-		ice Soil Cracks (B6)		
	ter Table (A2)				uatic Plar			age Patterns (B10)		
X Saturation	` '		_		n Sulfide	•		Season Water Table (C2)		
	arks (B1)				d Rhizosp	heres on		fish Burrows (C8)		
	nt Deposits (B2)			_(C3)	f Dd-			ration Visible on Aerial Imagery (C9)		
	oosits (B3) it or Crust (B4)		_	_	e of Redu		• • •	ted or Stressed Plants (D1) norphic Position (D2)		
	osits (B5)			(C6)	iion Reau	iction in i		Neutral Test (D5)		
	on Visible on Aeria	ıl Imager	(B7) —	` ′	ck Surfac	e (C7)	<u> </u>	ivediai rest (D3)		
	Vegetated Conca				or Well Da	. ,				
	tained Leaves (B9				xplain in	, ,)			
Field Obser	•	,	_		лрічіі і і	rtornanto	<i>,</i>			
Surface wat		Yes	X No		Donth (i	noboo):	Surafce			
Water table		Yes	X No	-	Depth (i Depth (i		0	Indicators of wetland		
Saturation p	•	Yes	$\frac{X}{X}$ No		Depth (i	•	0	hydrology present?		
	pillary fringe)	163			- Deptil (i	nones).		nydrology present:		
				المعتادة	hotoo n		annetions) if eveilable			
Describe red	corded data (strea	am gauge	e, monitoring we	ıı, aeriai p	pnotos, p	revious ii	nspections), if available	9:		
Remarks:										
rtemants.										

Project/Site Hillcrest Redevelopment	City/	County:	St. Pau	I Sampling Date:	4/22/20
Applicant/Owner: St. Paul Port Authority		State:	MN	Sampling Point:	J1 Up
Investigator(s): Dustin S.		Section	on, Township	o, Range: S2	· · · · · · · · · · · · · · · · · · ·
Landform (hillslope, terrace, etc.): Hills	ope			re, convex, none):	
Slope (%): 5 Lat: 44.989838		Long:	-93.0119		
Soil Map Unit Name Udorthents		<u> </u>		Classification:	PEMF
Are climatic/hydrologic conditions of the site typical for	r this time o	f the vear?		f no, explain in remarks)	
, ,	logy	-		Are "normal circ	numetancee"
Are vegetation , soil , or hydrol		naturally pro		Ale normal circ	present? Yes
SUMMARY OF FINDINGS		71		(If needed, explain any	answers in remarks.)
Hydrophytic vegetation present? Y				, , ,	,
Hydric soil present? N	-	Is the s	ampled area	a within a wetland?	N
Indicators of wetland hydrology present?	-		tional wetlan		
	<u>-</u> .				
Remarks: (Explain alternative procedures here or in a	separate re	eport.)			
	Area is w	etter than n	ormal.		
VEGETATION Use scientific names of plan	ts.				
7 0 4 70 4 70 1	Absolute	Dominan	Indicator	Dominance Test Work	
Tree Stratum (Plot size: 30')	% Cover 25	-	Staus FACU	Number of Dominant Spe that are OBL, FACW, or F	
1 Quercus rubra 2 Fraxinus pennsylvanica	20	<u>Y</u> Y	FACW		``
3 Acer saccharinum	20	<u> </u>	FACW	Total Number of Domi Species Across all St	
4				Percent of Dominant Spe	
5				that are OBL, FACW, or F	
	65	= Total Cover			
Sapling/Shrub stratum (Plot size: 15'				Prevalence Index Wor	ksheet
1	40	<u> </u>		Total % Cover of:	
2				OBL species 0	x 1 = 0
3				FACW species 40 FAC species 0	$\begin{array}{ccc} x & 2 & = & 80 \\ x & 3 & = & 0 \end{array}$
5				FACU species 25	x = 4 = 100
	40	= Total Cover		UPL species 0	x 5 = 0
Herb stratum (Plot size: 5')				Column totals 65	(A) 180 (B)
1	35	Υ		Prevalence Index = B/A	= 2.77
2					
3				Hydrophytic Vegetation	n Indicators:
4				Rapid test for hydro	
5				Dominance test is >	
6				X Prevalence index is	
8				Morphogical adapta	
9				supporting data in F separate sheet)	Remarks of on a
10				Problematic hydrop	hytic vegetation*
	35	= Total Cover		(explain)	, ac regetation
Woody vine stratum (Plot size: 30')				*Indicators of hydric soil and	d wetland hydrology must be
1				present, unless dist	urbed or problematic
2				Hydrophytic	
	0	= Total Cover	٢	vegetation present?	Y
Demorker (Include photo purchase have as as a series	ata abaat\				·
Remarks: (Include photo numbers here or on a separa	ate sneet)				

SOIL Sampling Point: J1 Up

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	indicat	or or confirm the a	bsence of indicators.)
Depth	Matrix		•	dox Feat				,
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-16	10YR 2/1	100					Loam	
16-24	10YR 4/4	100					Clay loam	
10-24	101144/4	100					Clay loan	
*Type: C = 0	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains. **L	ocation: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators for	Problematic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast Prai	rie Redox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	dy Redo	x (S5)			ce (S7) (LRR K, L)
	Black Histic (A3) Stripped Matrix (S						Iron-Manga	anese Masses (F12) (LRR K, L, R)
— Hyc	lrogen Sulfide (A	4)	Loa	my Mucl	ky Minera	al (F1)	Very Shallo	ow Dark Surface (TF12)
	tified Layers (A5			-	ed Matrix			lain in remarks)
2 cr	n Muck (A10)	,			atrix (F3)			,
	leted Below Dark	s Surface			Surface			
	ck Dark Surface (` '		ark Surfa	. ,	*Indicators o	of hydrophytic vegetation and weltand
	dy Mucky Minera	•			essions (. ,		nust be present, unless disturbed or
	n Mucky Peat or			.с. 2 ор.	,	(. 0)	ny aronogy r	problematic
			,			1		p
	Layer (if observ	ed):						10 N
Type:					-		Hydric soil p	resent? N
Depth (inche	es):				_			
Remarks:								
HYDROLO	OGY							
Wetland Hy	drology Indicate	ors:						
Primary Indi	cators (minimum	of one is	required; check	all that a	(vlaa		Seconda	ary Indicators (minimum of two required)
	Water (A1)		,		Fauna (B	13)		ırface Soil Cracks (B6)
	ter Table (A2)				uatic Plar	,		ainage Patterns (B10)
Saturation						Odor (C1		y-Season Water Table (C2)
	arks (B1)					•	·	ayfish Burrows (C8)
	nt Deposits (B2)			(C3)			•	aturation Visible on Aerial Imagery (C9)
	oosits (B3)				e of Redu	ced Iron		unted or Stressed Plants (D1)
	it or Crust (B4)						· ·	eomorphic Position (D2)
	osits (B5)			(C6)			—— F <i>A</i>	AC-Neutral Test (D5)
	on Visible on Aeria	al Imagery	/ (B7)		ck Surfac	e (C7)		, ,
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:			1				
Surface wat	er present?	Yes	No	X	Depth (i	nches):		
Water table		Yes	No	X	Depth (i			Indicators of wetland
Saturation p		Yes	No	X	Depth (i			hydrology present? N
(includes ca						•		<u> </u>
Describe red	orded data (strea	am gauge	e. monitorina well	. aerial p	hotos, pi	revious ir	nspections), if availa	ble:
	•	5 5	, 3	, '	, ,		, ,,	
Remarks:								

Project/Site Hillcrest Redevelopment	City/	County:	St. Pau	I Sampling Date	e: 4/22/20		
Applicant/Owner: St. Paul Port Authority		State:	MN				
Investigator(s): Dustin S.			on. Townshii	p, Range: S			
Landform (hillslope, terrace, etc.): Depre	ssion			ve, convex, none):			
Slope (%): 0 Lat: 44.989838		Long:	-93.0119				
Soil Map Unit Name Cathro Muck				Classification:	PEMF		
Are climatic/hydrologic conditions of the site typical for	r this time o	f the vear?					
, ,	logy	•		,			
		naturally pro		Are "normal ci	rcumstances" present? Yes		
Are vegetation, soil , or hydrol SUMMARY OF FINDINGS		naturally pro	obiemanc:	(If needed, explain any	· —		
Hydrophytic vegetation present?				(ii fieeded, explain any	answers in remarks.)		
	_	Is the sampled area within a wetland?					
	-		-		<u> </u>		
Indicators of wetland hydrology present? Y		r yes, op	tional wetlar				
Remarks: (Explain alternative procedures here or in a	separate re	eport.)					
	Area is w	etter than n	ormal				
	Alca is w	Cuci mann	iorriai.				
VEGETATION Use scientific names of plan	ts.						
	Absolute	Dominan	Indicator	Dominance Test Wor	ksheet		
Tree Stratum (Plot size: 30')	% Cover	t Species	Staus	Number of Dominant Sp	ecies		
1 Acer saccharinum	25	Υ	FACW	that are OBL, FACW, or	FAC: 2 (A)		
2 Fraxinus pennsylvanica	20	Υ	FACW	Total Number of Don			
3				Species Across all S	 ` ' '		
4				Percent of Dominant Sp			
5	45	= Total Cover		that are OBL, FACW, or	FAC: 66.67% (A/B)		
Sapling/Shrub stratum (Plot size: 15')	1 45	- Total Cover		Prevalence Index Wo			
1	, 40	Υ		Total % Cover of:	TROTICCE		
2				OBL species 0	x 1 = 0		
3				FACW species 45	x 2 = 90		
4				FAC species 0	x 3 = 0		
5				FACU species 0	x 4 = 0		
	40	= Total Cover	-	UPL species 0	x 5 = 0		
Herb stratum (Plot size: 5'))			Column totals 45	(A) 90 (B)		
1				Prevalence Index = B/	A = 2.00		
2							
3				Hydrophytic Vegetati			
4				l 	ophytic vegetation		
5				X Dominance test is			
0				X Prevalence index i			
8				Morphogical adapt supporting data in			
9				supporting data in separate sheet)	Remarks of on a		
10				Problematic hydro	phytic vegetation*		
	0	= Total Cover	-	(explain)	priyate vegetation		
Woody vine stratum (Plot size: 30'					nd wetland hydrology must be		
1					sturbed or problematic		
2				Hydrophytic			
	0	=Total Cover	-	vegetation	V		
				present?	<u>Y</u>		
Remarks: (Include photo numbers here or on a separa	ate sheet)						

SOIL Sampling Point: J1 Wet

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abs	ence of indicators.)	
Depth Matrix Redox Fe								ĺ	
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-14	10YR 2/1	100					Loam		
14-24	10YR 5/2	90	10YR 4/4	10	С	М	Loam		
14-24	1011372	90	1011/4/4	10	C	IVI	LUaiii		
	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	I, MS = N	/lasked S		ation: PL = Pore Lining, M = Matrix	
_	il Indicators:							oblematic Hydric Soils:	
	tisol (A1)				ed Matrix	(S4)		Redox (A16) (LRR K, L, R)	
	tic Epipedon (A2)			ndy Redo				(S7) (LRR K, L)	
	ck Histic (A3)			pped Ma	. ,			ese Masses (F12) (LRR K, L, R)	
	Irogen Sulfide (A	,		-	ky Minera			Dark Surface (TF12)	
	atified Layers (A5)			ed Matrix		Other (explain	n in remarks)	
	m Muck (A10)				atrix (F3)				
	leted Below Dark		· · —		Surface	. ,			
	ck Dark Surface (•			ark Surfa	. ,		ydrophytic vegetation and weltand	
	idy Mucky Minera			dox Depr	essions ((F8)	hydrology mus	st be present, unless disturbed or	
5 cr	m Mucky Peat or	Peat (S3)					problematic	
Restrictive	Layer (if observ	ed):							
Type:	`	•					Hydric soil pres	sent? Y	
Depth (inche	es):				•				
Remarks:									
T CITICINO.									
HYDROLO	nev								
	drology Indicate	re:							
_				-11 414	I\		0 1		
	cators (minimum	of one is	required; check			10)		Indicators (minimum of two required)	
	Water (A1)				Fauna (B	•		ce Soil Cracks (B6)	
	iter Table (A2)				uatic Plar			age Patterns (B10)	
Saturation						Odor (C	· ·	eason Water Table (C2)	
	arks (B1)				Rnizosp	neres on	· ·	ish Burrows (C8)	
	nt Deposits (B2)			(C3)	o of Body	uced Iron		ation Visible on Aerial Imagery (C9)	
	oosits (B3) at or Crust (B4)			-			· ·	ed or Stressed Plants (D1) norphic Position (D2)	
	osits (B5)			(C6)	ion Redu	iction in i		Neutral Test (D5)	
	on Visible on Aeria	ıl İmanen	, (B7)	_	ck Surfac	o (C7)	<u>X</u> FAC-	Neutral Test (D3)	
	Vegetated Conca		· · · —	_	or Well Da	` '			
	tained Leaves (B9			_		Remarks)		
	,	,	_	- 0 11101 (E	.хрішіт ііт	rtemanto	<i>,</i>		
Field Obser		Yes	No	~	Depth (i	noboo):			
Surface wate		Yes	No	$\frac{X}{X}$				Indicators of wetland	
Water table Saturation p		Yes	X No		Depth (i Depth (i	-	0-6	hydrology present?	
	pillary fringe)	163			ا) popui (ا	1101103).			
		am goug	a monitoring well	Loorialn	hotos n	rovious ir	nspections), if available		
Describe rec	Joined data (Silea	aiii gaugi	e, monitoring wei	i, aeriai p	motos, p	revious ii	ispections), ii avaliable		
Remarks:									
	saturation but o	did not l	nave a water to	ahle nre	sent				
Juliace	oataration but (aiu iiUt l	iavo a water ta	inie hie	JOHL.				
Ī									

Project/Site Hillcrest Redevelopment	City/	County:	St. Pau	I Sampling Date	e: 4/22/20
Applicant/Owner: St. Paul Port Authority		State:	MN		
Investigator(s): Dustin S.		Section	23, T29, R22		
Landform (hillslope, terrace, etc.): Depre	ssion			re, convex, none):	
Slope (%): 0 Lat: 44.988758		Long:	-93.0091		
Soil Map Unit Name Kingsley sandy loam		<u> </u>		Classification:	PEMF
Are climatic/hydrologic conditions of the site typical for	r this time o	f the vear?		f no, explain in remarks)	
, ,	logy	•		Are "normal cir	
Are vegetation , soil , or hydrol		naturally pro		Ale normal cil	present? Yes
SUMMARY OF FINDINGS				(If needed, explain any	· —
Hydrophytic vegetation present? Y				, , ,	,
Hydric soil present? N	_	Is the s	ampled area	a within a wetland?	N
Indicators of wetland hydrology present?	_		tional wetlar		
7 371	-				
Remarks: (Explain alternative procedures here or in a	separate re	eport.)			
	Area is w	etter than n	ormal.		
VEGETATION Use scientific names of plan	ts.				
7 0 4 70 4	Absolute	Dominan	Indicator	Dominance Test Wor	
Tree Stratum (Plot size: 30') 1 Populus tremuloides	% Cover		Staus FAC	Number of Dominant Sp that are OBL, FACW, or	
2 Fraxinus pennsylvanica	15 10	<u>Y</u> Y	FACW		
3			TACV	Total Number of Dom Species Across all S	
4				Percent of Dominant Sp	
5				that are OBL, FACW, or	
	25	= Total Cover	-		
Sapling/Shrub stratum (Plot size: 15'				Prevalence Index Wo	rksheet
1				Total % Cover of:	
2				OBL species 0	x 1 = 0
3				FACW species 10 FAC species 115	
5				FAC species 115 FACU species 0	$- x 4 = \frac{345}{0}$
	0	= Total Cover	-	UPL species 0	-x = -0
Herb stratum (Plot size: 5'))			Column totals 125	(A) 365 (B)
1 Poa pratensis	100	Υ	FAC	Prevalence Index = B/A	A = 2.92
2					
3				Hydrophytic Vegetati	on Indicators:
4				Rapid test for hydro	
5				X Dominance test is	
6				X Prevalence index is	
8				Morphogical adapt	
9				supporting data in separate sheet)	Remarks of on a
10				Problematic hydro	ohytic vegetation*
	100	= Total Cover	-	(explain)	
Woody vine stratum (Plot size: 30')				*Indicators of hydric soil ar	nd wetland hydrology must be
1				•	sturbed or problematic
2				Hydrophytic	
	0	= Total Cover	-	vegetation present?	Υ
Demorker (Include photo purchase have as as a series	oto obset)				<u>•</u>
Remarks: (Include photo numbers here or on a separa	ате ѕпеет)				

SOIL Sampling Point: Sp 1

Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	indicat	or or confirm the abse	nce of indicators.)			
Depth	<u>Matrix</u>		Red	lox Feat	ures						
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-18	10YR 2/1	100					Loam				
18-24	10YR 4/4	100					sandy loam				
							Sanay isam				
*T	Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix										
		= Depleti	on, Rivi = Reduce	ed iviatrix	, IVIS = IV	iasked S		tion: PL = Pore Lining, M = Matrix			
_	il Indicators:		Com	du Clave	ad Matrix	(04)		blematic Hydric Soils:			
	isol (A1)				ed Matrix	(54)		Redox (A16) (LRR K, L, R)			
	ic Epipedon (A2)			dy Redo	. ,			S7) (LRR K, L) se Masses (F12) (LRR K, L, R)			
	ck Histic (A3)	1)		oped Ma	, ,	-I /E4\	=				
	rogen Sulfide (A4			-	ky Minera	. ,		Dark Surface (TF12)			
	tified Layers (A5))			ed Matrix		Other (explain	in remarks)			
	n Muck (A10) lleted Below Dark	Curfood			atrix (F3) Surface			ı			
	k Dark Surface (· · · —		irk Surface	. ,	*1!	London Community Community Community			
	dy Mucky Minera				essions (drophytic vegetation and weltand			
	•			юх Берг	essions ((го)	nydrology mus	be present, unless disturbed or problematic			
	n Mucky Peat or l)					problematic			
	Restrictive Layer (if observed):										
Туре:							Hydric soil pres	ent? N			
Depth (inche	es):										
Remarks:											
HYDROLO	OGY										
	drology Indicato	rs:									
1			required; check a	all that a	oply)		Casandanil	adiantara (minimuma aftuva rasuirad)			
		or one is	required, check a			12)	· · · · · · · · · · · · · · · · · · ·	ndicators (minimum of two required) e Soil Cracks (B6)			
	Water (A1) ter Table (A2)				Fauna (B uatic Plan	-		ge Patterns (B10)			
Saturatio	, ,				n Sulfide	` ,		eason Water Table (C2)			
	arks (B1)					•	· ·	sh Burrows (C8)			
	t Deposits (B2)			(C3)	i i tilizoop	110100 011	· ·	tion Visible on Aerial Imagery (C9)			
	osits (B3)				e of Redu	iced Iron		d or Stressed Plants (D1)			
	t or Crust (B4)						<u> </u>	orphic Position (D2)			
	osits (B5)			(C6)				eutral Test (D5)			
	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		, ,			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	r Well Da	ta (D9)					
Water-St	Water-Stained Leaves (B9) Other (Explain in Remarks)										
Field Obser	vations:										
Surface water	er present?	Yes	No	X	Depth (i	nches):					
Water table		Yes	No	Х	Depth (i		ı	ndicators of wetland			
Saturation p		Yes	No	Х	Depth (i	nches):		hydrology present? Y			
(includes cap	oillary fringe)				- 						
Describe rec	orded data (strea	ım gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	nspections), if available:				
	•	_ 3	_		•		·				
Remarks:		<u></u>		<u></u>							
Surface s	saturation but o	did not l	nave a water ta	ble pre	sent.						

Project/Site Hillcrest Redevelopment	City/	County:	St. Pau	Sampling Date: 4/22/2		4/22/20
Applicant/Owner: St. Paul Port Authority	_	State:	MN	Sampling Point: Sp		Sp 2
Investigator(s): Dustin S.		Section, Township, Range: S23, T29, R22				
Landform (hillslope, terrace, etc.): Depres	ssion	Local r	elief (concav	re, convex, none):	Conc	ave
Slope (%): 0 Lat: 44.982026	3	Long:	-93.0052	.8 Datum:		
Soil Map Unit Name Kingsley sandy loam			VWI (Classification:		
Are climatic/hydrologic conditions of the site typical for	r this time o	of the year?	N_ (I	f no, explain in rema	arks)	
Are vegetation, soil, or hydrol	logy	significantly	/ disturbed?	Are "norm	nal circumstance	es"
Are vegetation , soil , or hydrol	logy	naturally pr	oblematic?			nt? Yes
SUMMARY OF FINDINGS				(If needed, explain	า any answers i	n remarks.)
Hydrophytic vegetation present? N						
Hydric soil present? N	_	Is the s	ampled area	a within a wetland?	? N	
Indicators of wetland hydrology present? N	_	f yes, op	tional wetlar	nd site ID:		
Remarks: (Explain alternative procedures here or in a	separate re	eport.)				
	•					
	Area is w	etter than r	normal.			
VEGETATION Use scientific names of plant	ts.					
	Absolute	Dominan	Indicator	Dominance Test	Worksheet	
Tree Stratum (Plot size: 30')	% Cover	t Species	Staus	Number of Domina	nt Species	
1 Quercus rubra	15	Y	FACU	that are OBL, FACV	V, or FAC:	1 (A)
2 Fraxinus pennsylvanica	10	<u>Y</u>	FACW	Total Number of		- (D)
3				Species Across		2 (B)
5				Percent of Domina that are OBL, FACV	•	0.00% (A/B)
] 3	25	= Total Cove	r	liat alo ODE, 1710.	v, or i / io	.0070 (745)
Sapling/Shrub stratum (Plot size: 15'))		•	Prevalence Index	Worksheet	
1				Total % Cover of:		
2				OBL species	0 x 1 =	0
3				FACW species	10 x 2 =	20
4				FAC species FACU species	0 x 3 = 15 x 4 =	0 60
<u> </u>	0	= Total Cove	r	UPL species	$\frac{15}{0}$ x 5 =	0
Herb stratum (Plot size: 5')	,	10101 0010.		Column totals	25 (A)	80 (B)
1	,			Prevalence Index	``	3.20
2				1.5.5		
3		,		Hydrophytic Veg	etation Indicat	ors:
4					hydrophytic ve	getation
5				Dominance te		
6				Prevalence in		
8					adaptations* (pr	
9	-	,		supporting da separate shee	ta in Remarks o et)	or on a
10				· — ·	ydrophytic vege	etation*
	0	= Total Cove	r	(explain)	J J	
Woody vine stratum (Plot size:))			*Indicators of hydric	soil and wetland h	ydrology must be
1				present, unle	ess disturbed or pro	
2		= : : 0		Hydrophytic vegetation		
	0	= Total Cover	r	present?	N	
Remarks: (Include photo numbers here or on a separa	ate sheet)			•		
Tremarks. (moldide prioto humbers here or on a separe	ate sheet)					

SOIL Sampling Point: Sp 2

Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	indicat	or or confirm the abser	ce of indicators.)			
Depth	<u>Matrix</u>		Red	lox Feat	<u>ures</u>						
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-8	10YR 2/1	100					Loam				
8-16	10YR 2/1	100					sandy loam				
16-24	10YR 4/4	100					Sandy loam				
10-24	10111 4/4	100					Oandy loann				
*Type: C = C	Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix										
	il Indicators:	- Depleti	on, Rivi – Reduce	u Mali IX	, 1013 – 10	iaskeu S		lematic Hydric Soils:			
-	isol (A1)		San	dy Glave	ed Matrix	(\$4)		edox (A16) (LRR K, L, R)			
	ic Epipedon (A2)			dy Redo		(04)	Dark Surface (S				
	ck Histic (A3)			oped Ma	. ,			e Masses (F12) (LRR K, L, R)			
	rogen Sulfide (A	1)		•	ky Minera	al (F1)		ark Surface (TF12)			
	tified Layers (A5)			•	ed Matrix	. ,	Other (explain i	The state of the s			
	n Muck (A10)	,			atrix (F3)		Outer (explain in	Tromano)			
	leted Below Dark	Surface			Surface			ı			
	k Dark Surface (· · · —		ırk Surfa	. ,	*Indicators of hyd	rophytic vegetation and weltand			
	dy Mucky Minera	•			essions (be present, unless disturbed or			
	n Mucky Peat or l				,	. •)	nyarology maor	problematic			
	Restrictive Layer (if observed):										
Type:					•		Hydric soil prese	nt? N			
Depth (inche	es):				•						
Remarks:											
HYDROLO	OGY										
Wetland Hy	drology Indicate	rs:									
Primary India	cators (minimum	of one is	required; check a	all that a	oply)		Secondary In	<u>dicators (minimum of two required)</u>			
Surface '	Water (A1)			Aquatic	Fauna (B	13)	Surface	Soil Cracks (B6)			
High Wa	ter Table (A2)				uatic Plar	, ,		e Patterns (B10)			
Saturation					n Sulfide			ason Water Table (C2)			
	arks (B1)				l Rhizosp	heres on		n Burrows (C8)			
	t Deposits (B2)			(C3)				on Visible on Aerial Imagery (C9)			
	osits (B3)				e of Redu			or Stressed Plants (D1)			
	t or Crust (B4)				ron Redu	ction in I		rphic Position (D2)			
	osits (B5) on Visible on Aeria	l Imagery	/ (B7)	(C6)	ck Surfac	e (C7)	FAC-N	eutral Test (D5)			
	Vegetated Conca		` '		r Well Da	. ,					
	ained Leaves (B9			_	xplain in)				
Field Obser	`	,		O (1101 (L	лрішіт іт	rtomanto	<i>'</i>				
Surface water		Yes	No	Х	Depth (i	nchee).					
Water table	•	Yes	No	X	Depth (i		In	dicators of wetland			
Saturation p		Yes	No	X	Depth (i			ydrology present?			
(includes cap		. 55			(I		 '				
		ım ตอบต	monitoring well	aerial n	hotos n	revious ir	nspections), if available:				
Pescine iec	oraca data (siita	gaugt	s, monitoring well	, acriai p	notos, pi	OVIOUS II	iopoolions), ii avallable.				
Remarks:											
Surface s	saturation but o	did not h	nave a water ta	ble pre	sent.						
				1	*						

APPENDIX

APPENDIX C

Wetland Photos



Photo 1 Wetland A looking northwest



Photo 3 Wetland B looking south eastern boundary



Photo 2 Wetland B looking south



Photo 4 Wetland A looking east northern edge



Photo 5 Wetland C looking south



Photo 7 Wetand E looking south



Photo 6 Wetland D looking north



Photo 8 Wetland E looking north



Photo 9 Wetland E looking east south edge



Photo 11 Wetland I looking north



Photo 10 Wet Ditch leading into Wetland I looking east



Photo 12 Wetland H looking east south end



Photo 13 SP 2 looking east



Photo 15 Wetland G looking northeast



Photo 14 Wetland F looking north



Photo 16 SP 1 looking south



Photo 17 Wetland J looking northwest

APPENDIX

APPENDIX D

Antecedent Precipitation Data

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination NRCS Engineering Field Handbook Chapter 19

Date	4/20/2020	Landowner/Project	Hillcrest Redevelopment
Weather Station	Midvale	State	MN
County	Ramsey	Growing Season	Yes
Photo/obs Date	4/23/2020	Soil Name	Various

shaded cells are
locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

1st Prior Month* 2nd Prior Month* 3rd Prior Month*

	30%	30%		Condition		Month	Product of
	chance	chance		Dry, Wet,	Condition	Weight	Previous 2
Month	<	>	Precip	Normal	Value	Value	Columns
March	1.46	2.21	2.54	W	3	3	9
February	0.52	1.14	0.60	N	2	2	4
January	0.59	1.32	0.73	N	2	1	2
*compared to photo/observation date Sum							

Condition value: **D**ry =1 Normal =2

Wet =3

Note: If sum is				
6 - 9	prior period has been drier			
	than normal			
10 - 14	prior period has been normal			
15 - 18	prior period has been wetter			
	than normal			

Conclusions: p	rior r	period has	s been	wetter tha	n normal
----------------	--------	------------	--------	------------	----------